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SECOND EDITION

SECRETS OF MEAT CURING AND SAUSAGE MAKING

131
501

HOW TO CURE

HAMS, SHOULDERS, BACON
CORNED BEEF, ETC.

AND

HOW TO MAKE ALL
KINDS OF

SAUSAGE, ETC.

AND COMPLY WITH ALL

PURE FOOD LAWS

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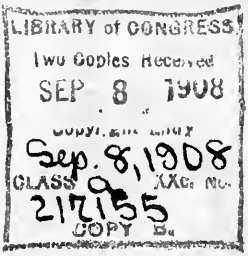

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PREFACE

ADOLPH HELLER

Adolph Heller, the father of the members of the firm of B. Heller & Co., was scientific and practical Butcher and Packer and a Practical Sausage Manufacturer. He studied the causes of failure in the handling of meats, with the aim of always producing the best and most uniform products that could be made. He was so successful in his business that his products were known and recognized as the best that could be made.

His sons were all given practical training in all departments of the business, from the bottom rung of the ladder to the top. The problems of the Packing Industry were kept constantly before them in their school and college days and influenced them in the investigations and study which developed into the present business of B. Heller & Co.

Under these circumstances, the Science of Chemistry naturally claimed the sons of Adolph Heller. Naturally, too, the Chemistry of the Meat Industry overshadowed all other branches of the fascinating profession. With their habits of study and investigation, they soon discovered that one of the great causes of failure in the curing and handling of meat products was the lack of materials which were always uniform, pure and dependable. This led to the founding of the firm of B. Heller & Co., whose aim has always been to furnish to the Butchers, Packers and Sausage Makers such materials as could be absolutely depended upon for purity and uniformity. They also early found that even with good materials to work with, the lack of fixed rules and formulas contributed largely to the lack of uniformity in the finished goods. This led to the publication of "Secrets of Meat Curing and

Sausage Making,'' in which definite rules were given for handling all kinds of meats and making all kinds of sausage.

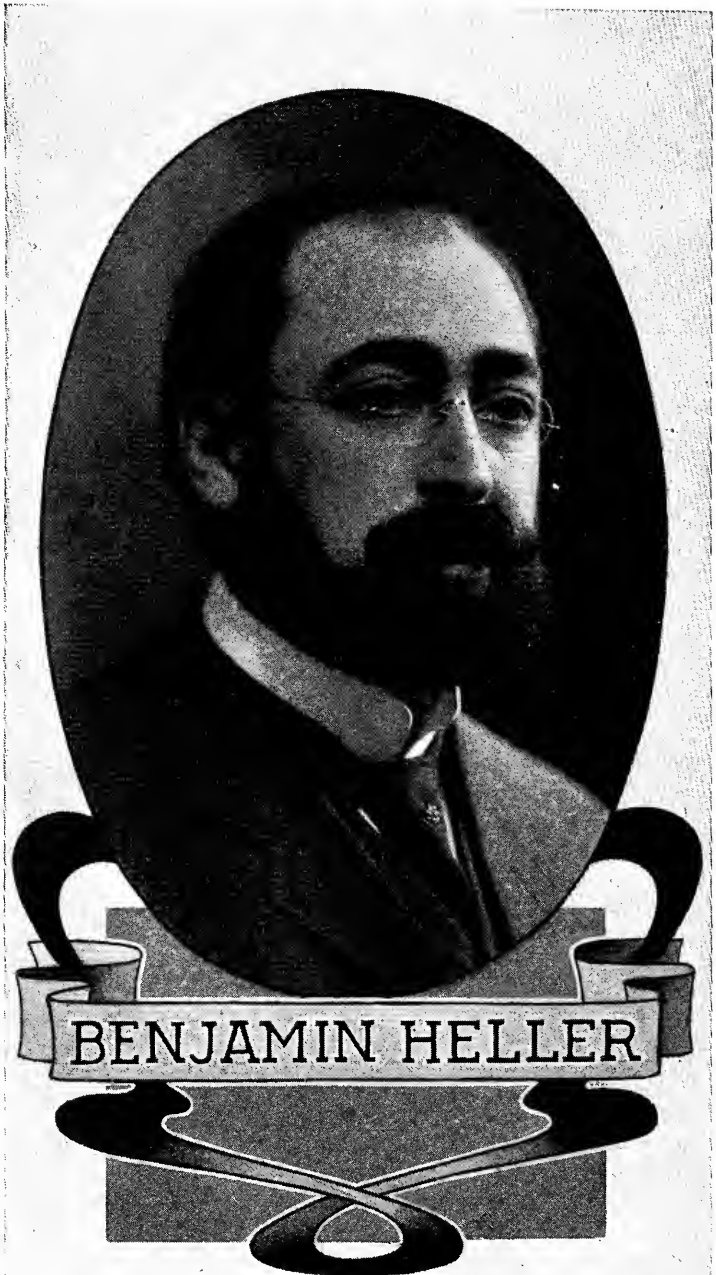
The enactment of the National Pure Food Law, the National Meat Inspection Law and the various State Pure Food Laws has made a great change in the Butcher, Packing and Sausage Making Business. The use of Chemical Preservatives is now prohibited under these various food laws, making it necessary to preserve meats and manufacture sausage without the use of many agents which were in general use.

The firm of B. Heller & Co. anticipated the enactment of the various food laws, and already had completed investigations which enabled them to assist packers, butchers and sausage makers at once by giving them curing agents which were free from the Antiseptic Preservatives which these laws prohibited, and yet would produce cured meats, sausage, etc, of the highest quality without the use of the Antiseptic Agents. The underlying principles for handling meats and making sausage with the antiseptic agents and without them are very different, and it became absolutely necessary that the firm of B. Heller & Co. should furnish their friends and customers such information as would enable them to cure their meats and make their sausage so as not to incur losses from goods that would not keep, and to turn out goods of fine quality and appearance. This book is the result. In its pages are formulas and rules for the handling of all kinds of meat and the manufacture of all kinds of sausage which are the results of many years of experience as Packing House Experts and Chemists who have made a life-time study of the business in all its phases. If the directions and rules are followed, anyone can produce the finest of cured meats and sausage, whether they have had previous experience or not. Furthermore, the products made according to these directions will comply with the requirements of all the Food Laws at present in force in this country.

Hoping the following pages will be found instructive and helpful and thanking the Butcher Trade for their support and patronage in the past, we beg to remain,

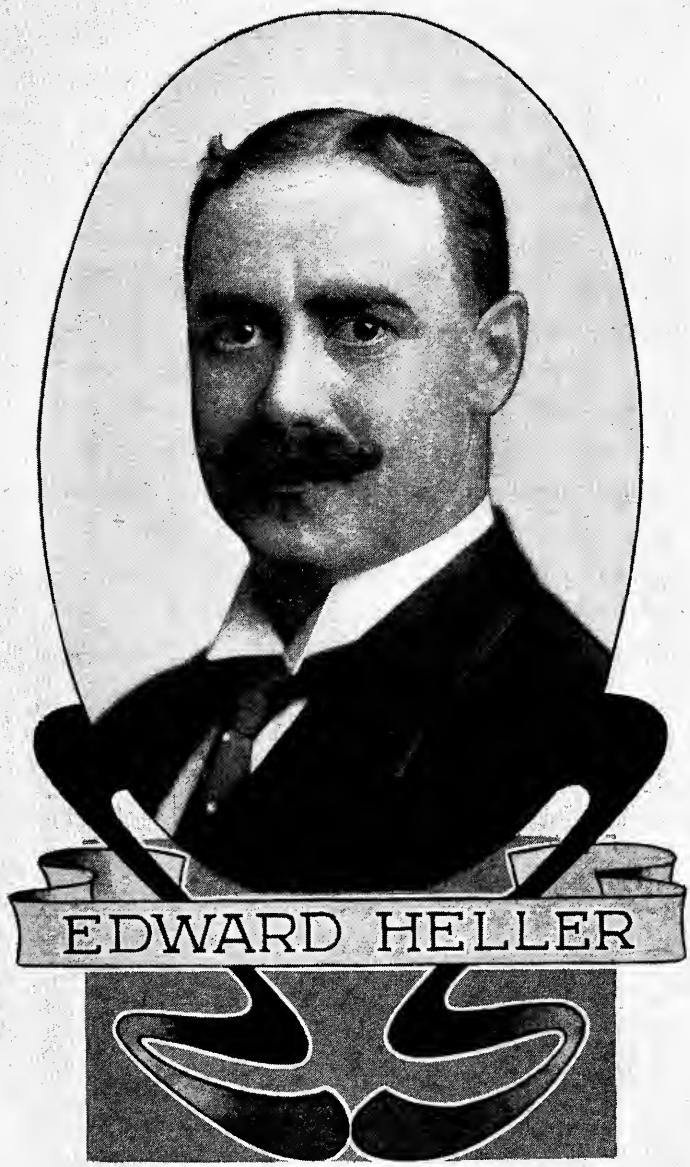
Very respectfully,

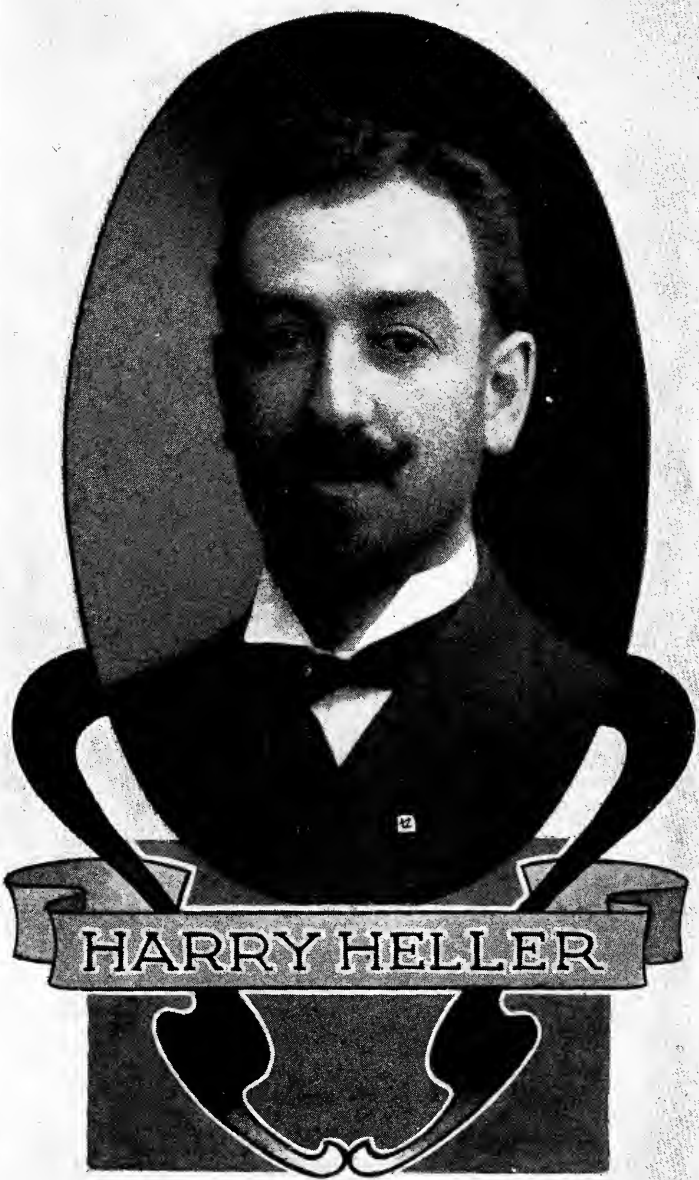
B. HELLER & CO.


BENJAMIN HELLER

ALBERT HELLER

JOE HELLER


EDWARD HELLER


HARRY HELLER

CHICAGO, U.S.A.

PACKING-HOUSE EXPERTS

Analytical and Consulting Chemists

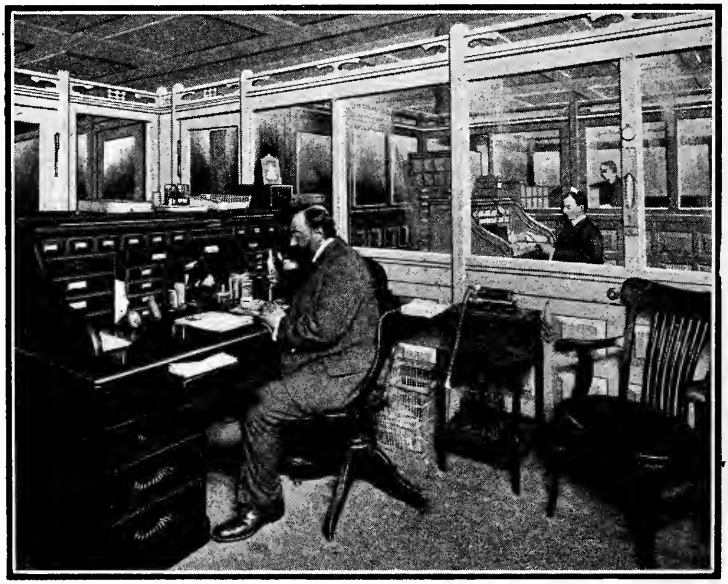
We have been Consulting Chemists for Large Packers for many years. Our advice in the handling of meats has saved packers many thousands of dollars. We offer our advice free of charge to our customers.

We make a specialty of both Analytic and Synthetic Chemistry. Our large clientele will always find us prompt in our services as heretofore.

Analyses Given Careful Attention

General Syntheses a Specialty

B. HELLER & CO.



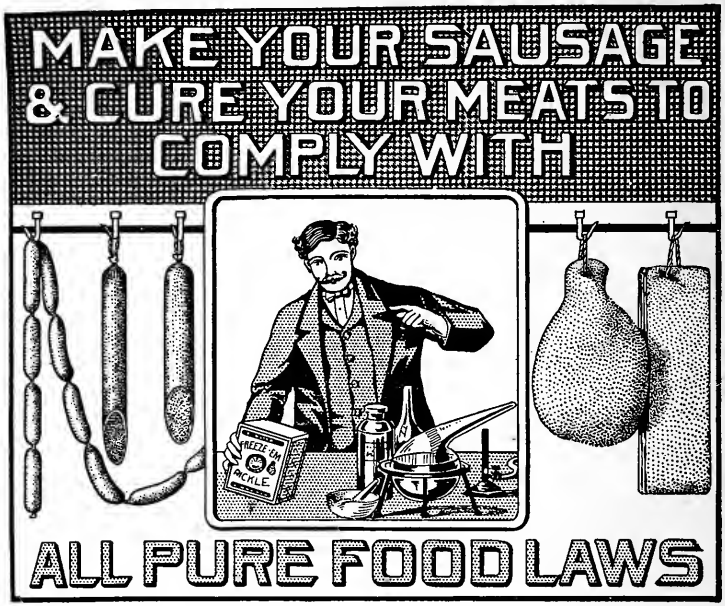
PRIVATE OFFICE
of
BENJAMIN HELLER

PRIVATE OFFICE
of
ALBERT HELLER

VIEW IN GENERAL OFFICE

VIEW IN GENERAL OFFICE

B. HELLER & CO.



The Board of Food and Drug Inspection of the Agricultural Department, at Washington, has permitted the use of certain Curing Agents, by not objecting to their use; but, at the same time, has ruled out, for curing purposes, such chemicals as come under the heading of Antiseptic Preservatives. As a consequence, certain chemical preservatives are prohibited in meats and meat food products if they are to be sold in the Territories or are to be shipped from one State to another, or from any State or Territory into any other State or Territory.

For that reason, we have changed some of our former preparations and have also placed on the market a preparation that will take the place of some of our former products. This new product is Freeze-Em-Pickle. It contains nothing that has been ruled out by any of the rulings or regulations under any of the food laws in this country.

The Antiseptic Preservatives that have been ruled out are: Borax, Boracic Acid, Fluoride of Ammonia, Formaldehyde, Benzoic Acid, Benzoate of Soda, Sulphurous Acid, Sulphite of Soda, Salicylic Acid, Abrastol and Beta Naphthol.

The use of some of these Preservatives is considered by many high authorities of the world to be harmless. However, as the majority of the Food Commissioners of this country object to their use, and have recommended to the State Legislatures and the Congress of the United States that the use of these Preservatives be prohibited by law, and the State Legislatures and United States Congress have passed laws to this effect; these laws are now in effect and it is, therefore, the duty of every citizen of this country to obey these laws, strictly and to the letter.

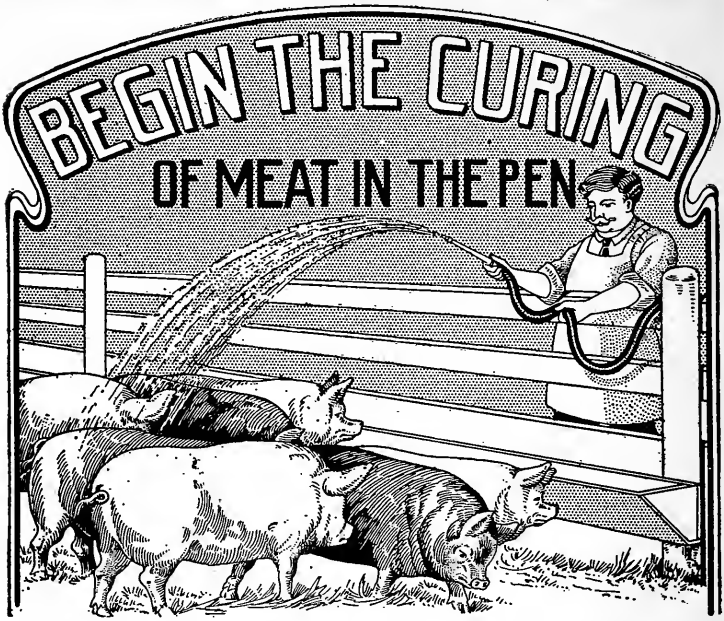
In this book we are giving to the Butchers and Sausage Manufacturers the results of much study and experiment, so as to enable the Butchers and Sausage Makers and Packers to produce goods which will meet the requirements of the various food laws and yet avoid the danger of loss from turning out meat food products that might not keep the necessary length of time. Our methods are original, and will produce most excellent results.

It must be remembered that meat must be handled at the proper temperature and according to certain rules, which must be followed to the letter if the Butcher desires to turn out products of the best quality and of appetizing appearance. No detail mentioned in this book is too small to merit strict attention.

All the materials mentioned for use in these pages are in strict accordance with the various food laws. Nothing is recommended or suggested that would come in conflict with the application of the regulations under the existing food laws.

We invite the correspondence of our customers and whenever they are in any doubt it will afford us much satisfaction to hear from them and to give them full information concerning any feature of their business upon which they desire our advice.

B. Keller & Co.



BEGIN CURING OF MEAT IN THE PEN.

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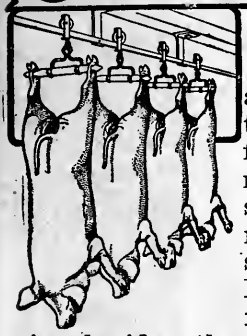
Thousands of pounds of Hams, Shoulders and Sides are spoiled annually before the hog is killed. Overheated hogs, or hogs that are excited from overdriving, should never be killed until they are cooled off or have become perfectly quiet. When the temperature of a hog is above normal, the meat always becomes feverish. This is especially true of large fat hogs, and when the meat becomes feverish, it will never cure properly, but nine times out of ten will sour. The meat of feverish hogs can never be chilled as it should be, and unless the meat is properly chilled, it cannot be properly cured. Before hogs are killed, they ought to be driven into a cool place and if necessary, sprayed with cold water until they are thoroughly cooled off. This precaution is necessary only in hot weather; in winter, they simply need plenty of rest.

If it is necessary to hold the hogs for several days in the pen before they are killed, they should have an abundance of water and also a little feed. This prevents shrinkage and will also keep them from getting nervous from hunger.

CURING PORK THE YEAR AROUND



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Up to a comparatively few years ago, all Pork Packing was done in the winter. Packing Houses would fill their plants during the winter months, and in the spring would smoke out the meats. In this way, most of the meat had to be sold oversalted, the shrinkage and loss to the Packer was greater and meats, therefore, had to be sold at a much higher price, besides, they were of very inferior quality.

At the present time, due to improved methods, packing can be done all the year around, and meat can be sold as fast as it is finished. In this way, cured meat can be produced at a much lower price, the money invested in it can be turned over four, five or six times a year, and the meat will be much better, taste better and more of it can be eaten because of the fact that it is more wholesome and more easily digested.

HOISTING HOGS IN A LARGE PACKING HOUSE, WITH A HOG-HOISTING MACHINE.

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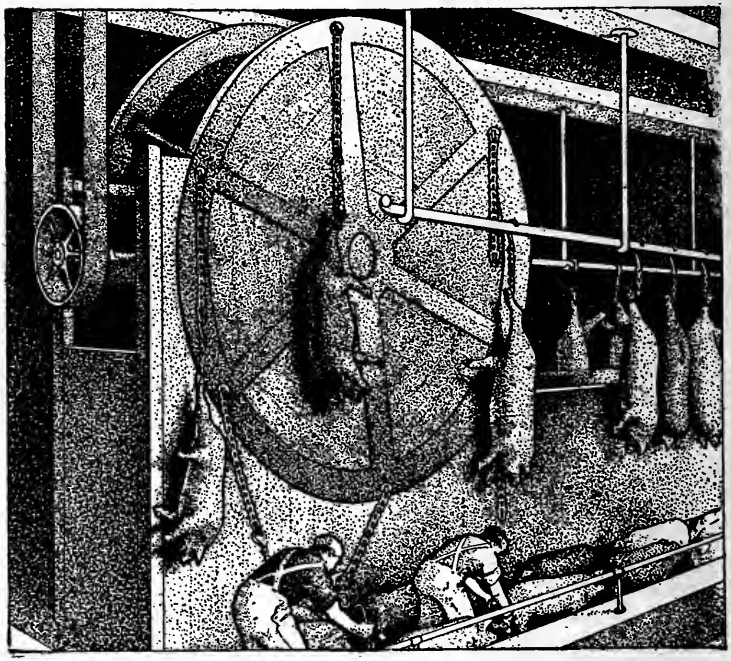
Great care should always be exercised when hogs are hoisted before sticking. When hogs are hoisted alive to be stuck, very often when a very heavy hog is jerked from the floor, the hip is dislocated or sprained, and blood will be thrown out around the injured joint, so the Ham will be spoiled. Great care should also be exercised in driving the live hogs, as hogs are the heaviest and weakest and easiest injured of all animals.

Special pens should be provided for them, so they are not crowded, and so they have plenty of room when they are driven to the killing pen. They should be handled very carefully, and piling up and crowding should be avoided as much as possible. Many hams are injured by overcrowding the hogs in the killing pens, for when hogs smell blood they become excited and nervous, and unless they have plenty of room, they will pile upon each other and bruise themselves so that



MACHINE USED IN LARGER PACKING HOUSES FOR HOISTING HOGS.

there will be many skin-bruised hams, and the flesh will be full of bruises. Men driving hogs should never use a whip. The best thing to use in driving hogs is a stick about two feet long, to the end of which is fastened a piece of canvas three inches wide and two feet long. By striking the hogs with this canvas, it makes a noise which will do more towards driving them, without injury, than the whip which will injure and discolor the skin.

STICKING HOGS IN A MODERN PACKING HOUSE.

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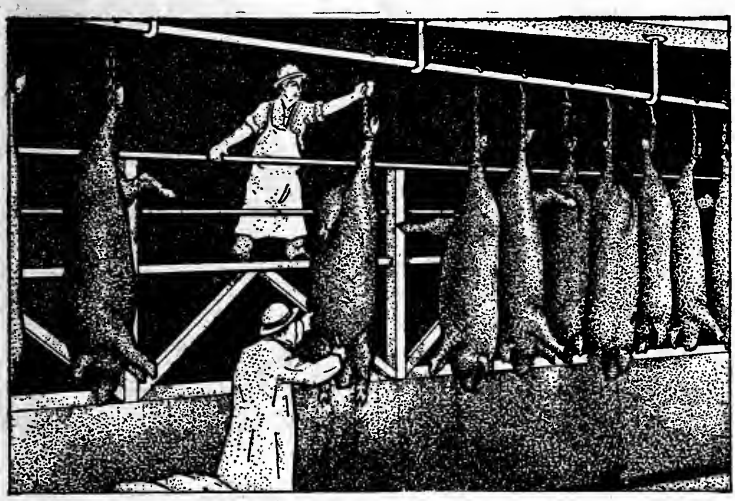
Men sticking hogs should be sure to make a good, large opening in the neck, three or four inches long, in order to give the blood a good, free flow. It is very necessary to sever the veins and arteries in the neck, so as to get all of the blood out of the hog. The man who does the sticking must be careful not to stick the

knife into the shoulder, for if the shoulder is stuck, the blood settles there, and the bloody part will have to be trimmed out after the hog is cut up. In large Packing Houses, there is a report made out every day, of the number of shoulder-stuck hogs, and the sticker must sign this report before it is sent to the office.



HOW HOGS ARE STUCK IN A LARGE MODERN PACKING HOUSE.

This shows the sticker the kind of work he is doing and makes him more careful. In small houses, most butchers stick the hogs on the floor and let them bleed there. Those who can possibly do it should hoist the hog by the hind leg before it is stuck or immediately after it is stuck, as the case may be, so as to allow the hog to properly bleed. When the hog is properly hoisted by one hind leg, alive, and then stuck while hanging, it will kick considerably and the kicking and jerking of the hog will help in pumping out all of the blood, making a much better bled carcass than if the hog is first stunned with a hammer and stuck on the floor. The better the hog is bled, the better the meat will be for curing.

SCALDING HOGS.

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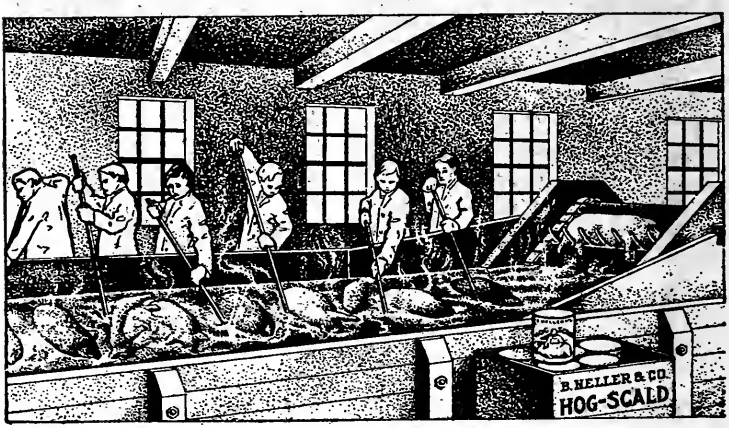
It is impossible to give the exact temperature one should use in scalding hogs, as this will vary under different circumstances. In winter the hair sticks much tighter than in summer and requires more scalding and more heat than in summer. Hogs raised in the South, in a warm climate, will scald much easier than those raised in a northern climate. A butcher will soon learn which temperature is best adapted to his own locality and the kind of hogs he is scalding.



SCALDING HOGS IN A LARGE MODERN PACKING HOUSE.

In a Packing House where a long scalding tub is used, the temperature depends entirely upon how fast the hogs are being killed. If the hogs are killed slowly, so each hog can remain in the water longer, it is not necessary to have the water as hot as when they are handled fast and are taken out of the water in a shorter time. It is, however, universally acknowledged that the quicker a hog can be taken out of the scalding tub the better it is for the meat. The hog is a great conductor of heat, and when kept in the scalding water too long, it becomes considerably heated and bad results have many times been traced to the fact that the hog was scalded in water which was not hot enough, and was kept in this water too long in order to loosen the hair. Overheating the hog in the scalding water very often causes the meat of fat hogs to sour and Packers wonder why it is that the meat has

spoiled. We therefore wish to caution Packers against this, and to advise the use of water as hot as practicable for scalding hogs.

To make the hair easy to remove and to remove all the dirt and impurities from the skin, we manufacture Hog-Scald. This preparation makes scalding easy, it removes all the dirt and filth, cleanses the hog and whitens the skin.

In many localities, where the water is hard, Hog-Scald will be found of great value, as it softens the water and makes it nice to work with; it cleanses the skin of the hogs and makes them as white as snow. It is a great labor saver and more than pays the cost by the labor it saves, as it assists in removing the hair and leaves the skin more yielding to the scraper.

The skin of all hogs is covered with more or less greasy filth, which contains millions of disease germs and these extend down into the pores of the skin. If this germ-laden filth is not removed, and if it gets into the brine when the meat is being cured, it injures both the meat and the brine in flavor, and also spoils the flavor of the lard if it gets into that. Hog-Scald removes all of this filth and bleaches the skin, and for these reasons alone, should be used by every Packer and Butcher. Hams and Bacon from hogs that have been scalded with Hog-Scald are, therefore, absolutely clean, and will be much brighter after they are smoked than when the filth of the hog remains in the pores of the skin.

Those selling dressed hogs will find Hog-Scald very valuable, as hogs that have been scalded with it are cleaner and look whiter and much more appetizing.

The use of Hog-Scald is legal everywhere. It does not come under the regulations of the Food Laws, as it is simply a cleansing agent. Hog-Scald costs very little at the price we sell it, and everyone can afford to use it. All butchers who once try it, always continue its use.

SCRAPING HOGS.

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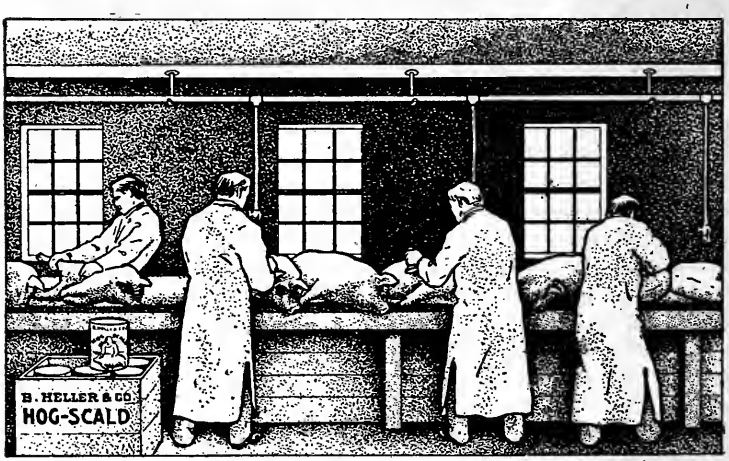
As much of the hair as possible should be scraped from the hogs, instead of being shaved off with a sharp knife, as is often done. If the hog is not properly scalded and scraped and the hair remains in the skin, such hair is usually shaved off with a knife before the hog is gutted, and sometimes after the meat is chilled and cut up. After the meat is cured, the rind shrinks and all the stubs of hair that have been shaved off will stick out and the rind will be rough like a man's face when he has not been shaved for a day or so. Hams and Bacon from hogs that have been shaved instead of properly scalded and scraped, will look much rougher and much more unsightly than if the hogs are properly scalded and scraped. Therefore, Packers should give close attention that the scalding and scraping is properly done. The scraping bench should be provided with a hose right above where the hogs are being scraped and this should be supplied with hot water,



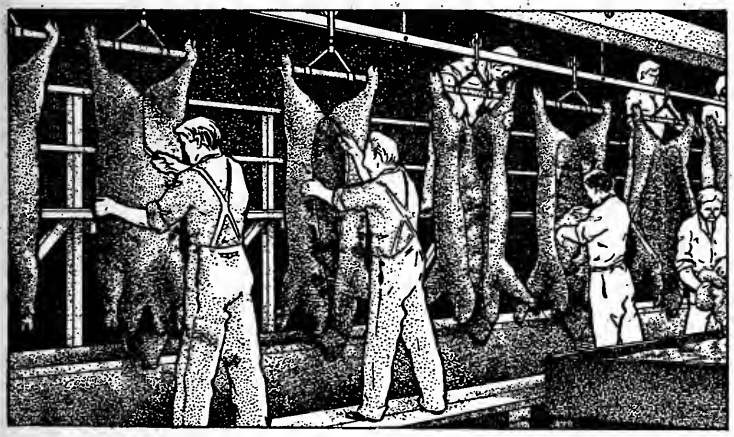
SCRAPING HOGS IN A PACKING HOUSE.

if possible, so the hogs can be rinsed off occasionally with hot water, while being scraped. The hot water can, however, be thrown over the hogs with a bucket.

After the hog has been gambrelled and hung up, either on a gambrel-stick or on rollers, it should be gutted. After it is gutted, it should be washed out

thoroughly, with plenty of cold, fresh water. As every Packer understands how to gut a hog, it is not necessary to go into details.

GUTTING HOGS IN A MODERN PACKING HOUSE.



CUTTING THE HIND SHANK BONE.

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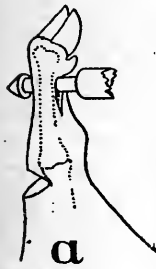
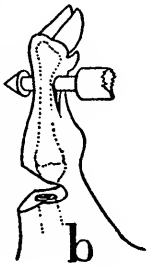
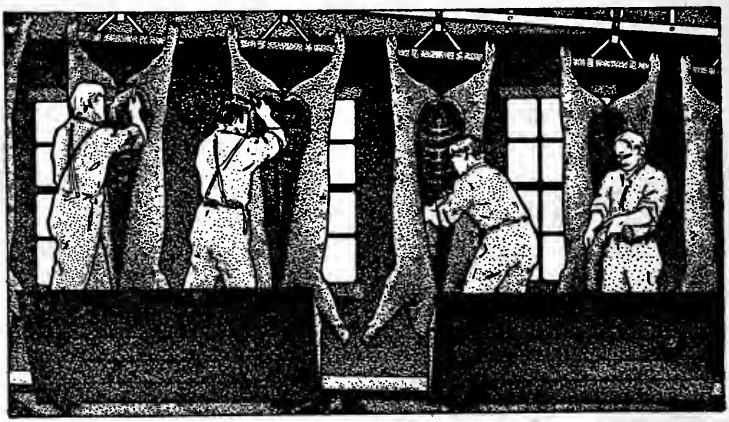


We advise the cutting of the hind shank bone after the hog is dressed, so as to expose the marrow, as shown in cuts A and B. It is the best thing to do, as it helps to chill the marrow. The chunk of meat that is usually left on the hind foot, above and next to the knee, if cut loose around the knee, will be drawn to the ham, and when chilled, will remain on the ham instead of being on the hind foot, as shown in cut A. After the meat is cut, the bone can be sawed, in the same place where the hock would be cut from the ham later. See cut B. The hog will hang on the sinews the same as if the bone had not been sawed, except that the cut bone separates and exposes the marrow so it can be properly cooled. On heavy hogs this is quite a gain, as the chunk that would remain on the foot would be of little or no value there, but when left on the ham, sells for the regular ham prices.





FACING HAMS AND PULLING LEAF LARD IN A MODERN PACKING HOUSE.

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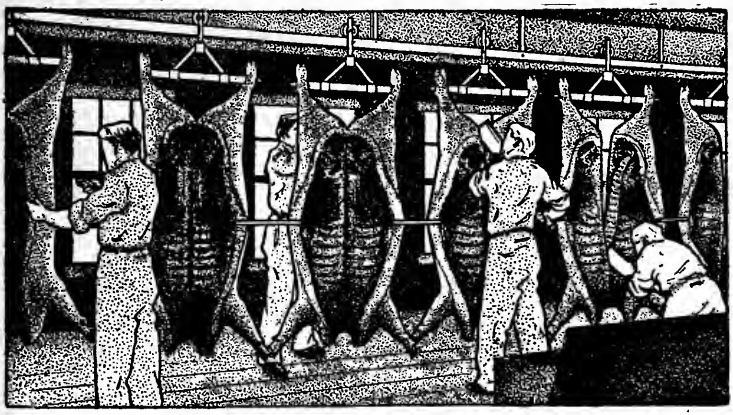
The first two figures in the above cut show two men Facing Hams. The first man faces the Ham at his right hand side and the second man faces the Ham on his left hand side, as the Hogs pass by.

The advantage of Facing Hams right after the hogs are dressed, is this. The knife can be drawn through the skin and through the fat close to the meat, and the fat will peel right off the fleshy part of the Ham. Between the fat and lean meat of the Ham, between the legs, there is a fibrous membrane which is very soft and pliable. When the knife is run through the skin and fat, it will run along the side of this membrane, making a clean face for the Ham. That part remaining on the Ham will shrink to the Ham and will form a smooth coating over the lean meat, which closes the pores and makes the Ham look smooth and nice when it is smoked. It also makes a much smoother cut along the skin. The skin when cut warm will dry nicely and look smooth when cured, whereas if it is trimmed after the meat is chilled, it looks rough and ragged. Facing Hams also allows the escape of the animal heat more readily. If Hams are not faced until after the Hogs have been chilled, this fat must be trimmed off and the Hams will not look nearly so smooth as they will if this tissue and fat is removed while the hog is warm.

The second two men in the above illustration are Pulling Leaf Lard. The Leaf Lard should always be pulled out of the hogs in summer, as it gives the hogs, as well as the Leaf Lard, a better chance to chill. During the winter months it can be pulled loose, but can be left hanging loosely in the hog, from the top. In this way it will cool nicely, and it will also allow the animal heat to get out of the hog. Most of the large packing houses pull out the Leaf Lard in the winter as well as summer, and hang it on hooks in the chill room to chill. Leaf Lard that is properly chilled, with the animal heat all taken out of it, makes much finer lard than when pulled out of the hog and put into the rendering tank with the animal heat in it.



SPLITTING HOGS IN A MODERN PACKING HOUSE.

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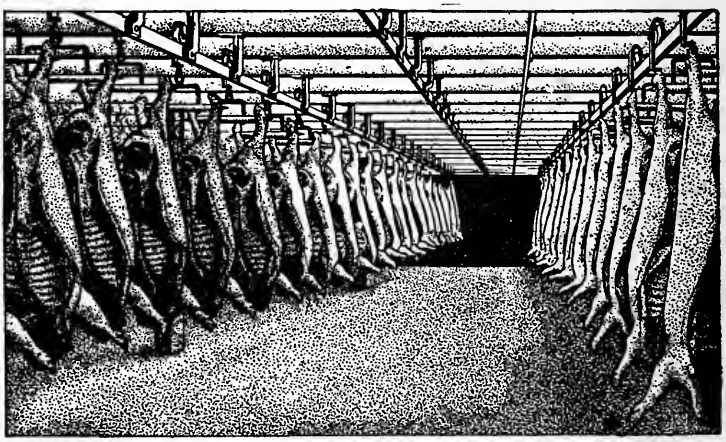
Splitting can be done in several different ways. Where the back of the hog is to be cut up for pork loins, the hog is simply split through the center of the backbone, so that one half of the backbone remains on each loin. Packers who wish to cut the sides into Short or Long Clears or Clear Bacon Backs run the knife down on both sides of the backbone, as close to the backbone as possible, cutting through the skin,

fat and lean meat; then the hog should be split down on one side of the backbone. The backbone should remain on the one side until the hog is cut up and it can then easily be sawed off with a small saw. By cutting or scoring the back in this way for making boneless side meat, the sides will be smooth and there will not be much waste left on the bone as when the backbone is split and half of it left on each side and then is peeled out after the meat is chilled and is being cut up.

VENTILATION IN HOG CHILL ROOM.



HOG CHILL ROOM IN A MODERN PACKING HOUSE.

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Many chill rooms are not properly built. There should be at least from 24 to 36 inches of space between the ceiling of the chilling room and the gambrel-stick, or more if possible, in order to enable the shanks to become thoroughly chilled. The animal heat which leaves the carcass naturally rises to the top of the cooler, and unless there is space between the ceiling and the top of the hog the heat will accumulate in the top of the cooler where the temperature will become quite warm; this will prevent the marrow in the shank and the joints from becoming properly chilled. It is this fact that accounts for so much marrow and shank sour in hams.

TEMPERATURE OF CHILL ROOM.

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All Packers who have a properly built cooler for chilling hogs and who are properly equipped with an ice machine will find the following rules will give the best results. Those who are not properly equipped should try to follow these rules as closely as they can with their equipment.

A hog chill room should be down to from 28 to 32 degrees Fahrenheit when the hogs are run into it. As the cooler is filled, the temperature will be raised to as high as 45 or 46 degrees F., but enough refrigeration must be kept on so the temperature is brought down to 36 degrees by the end of 12 hours after the cooler is filled, and then the temperature must be gradually reduced down as low as 32 degrees by the time the carcasses have been in the cooler 48 hours. In other words, at the end of 48 hours the cooler must be down to 32 degrees.

All large hog coolers should be partitioned off between each section of timbers, into long alleys, so that each alley can be kept at its own temperature.

In the improper chilling of the carcasses lies the greatest danger of spoiling the meat. The greatest care must be given to the proper chilling, for if the carcasses are not properly chilled, it will be very difficult to cure the meat, and it will be liable to sour in the curing. Meat from improperly chilled carcasses, even with the greatest care afterwards, will not cure properly. Therefore, one of the first places to look for trouble when Hams are turning out sour is to look to the chilling of the meat, as it is nine chances out of ten that this is where the trouble started from. We have found by experience that by deviating only a few degrees from these set rules, the percentage of sour meat is surprisingly increased.

It has always been considered an absolute necessity to have an open air hanging room to allow the hogs to cool off in the open air before they are run into the cooler. It has always been considered that this saves considerable money in the refrigeration of the hogs. However, by the experiments made in some of the large Packing Houses, it has been demonstrated that this economy is very much over-estimated. There are certain conditions which must be closely adhered to for

the safe handling and curing of pork products, and the most important of these is the proper temperature. In the outside atmosphere the proper temperature rarely prevails. Hogs that are left in the open air on the hanging floor over night are generally either insufficiently chilled or are over-chilled the next morning, depending upon the outside temperature of the air. We feel that it is of advantage, however, to run the hogs into an outside hanging room and to allow them to dry for one or two hours before putting them into the chilling room.

Packers who cure large quantities of hogs must see to it that their chill rooms are properly constructed and have sufficient refrigeration, so the temperature can be kept under perfect control at all times. The cooler should be partitioned off lengthwise, between each line of posts, making long alleys to run the hogs into, each one of which can be regulated as to its temperature separately from the others. The hogs can be run into one of these alleys as fast as they are killed and should the temperature get up above 50 degrees F., the hogs can be run out of this into another. The cooler in which hogs are chilled should never go above 50 degrees Fahrenheit, and a properly constructed cooler can be kept below this temperature.

While the cooler is being filled, the temperature should be held at between 45 and 50 degrees Fahrenheit, and should be kept at this temperature for about two hours after filling. At the end of two hours, all of the vapor will have passed away, being taken up by and frozen onto the refrigerator pipes, and the hogs will begin to dry. When the hogs begin to show signs of drying, or in about two hours after the refrigerator is filled, more refrigeration should be turned on, and the temperature should be gradually brought down, so that in twelve hours from the time the cooler is filled, the temperature should be brought down to 36 or 37 degrees temperature Fahrenheit. If the temperature is not brought down to 36 or 37 degrees F. in 12 hours it means a delay in removing the animal heat, and a tendency for decomposition to set in. If the temperature is brought down lower than 32 degrees Fahrenheit during the first 12 hours, the outside surface of the carcasses are too rapidly chilled, which tends to retard the escape of the animal heat. It is known, from practical experience, that where the meat is chilled through rather slowly, the animal heat leaves the meat more

uniformly. Too rapid chilling on the outside seems to clog up the outside of the meat so that the heat in the thick portions does not readily escape.

The first 12 hours of the chilling of all kinds of meat and the removal of the animal heat during this period is the most important part of the chilling. After that period, the proper temperature is of much less vital importance.

Hogs that are to be cut up for curing should never be cut up sooner than 48 hours after being killed, and the temperature of the cooler should be gradually brought down to 28 degrees Fahrenheit by the time the hogs are taken out of the chill room to be cut up. After the hogs have been in the cooler 12 hours the temperature should gradually be brought down from 36 degrees at the end of the first 12 hours, to 28 degrees at the end 48 hours; that is, if the hogs are to be cut up 48 hours after they are killed. If they are to be cut up 72 hours after being killed, the temperature should be brought down gradually from 36 degrees at the end of the first 12 hours, to 30 degrees F. at the end of 72 hours. This would mean that the temperature should be brought down from 36 degrees to 30 degrees F., if the hogs are to be cut up at the end of 72 hours, or a lowering of six degrees in practically 58 hours; or a lowering of eight degrees, from 36 to 28 Fahrenheit, if the hogs are to be cut up in 48 hours after being killed. This means a reduction in temperature of about one degree for every eight hours. This does not mean that the six or eight degrees should be reduced in two hours' time, for if that were done the meat would be frozen.

In a large Packing House, where the cooler is properly equipped, and one has a good attendant, these instructions can be carried out in detail. When the foregoing instructions are carefully followed, the safe curing of the product will be assured.

While the curing of course requires careful attention, yet, if the chilling is not done properly, the curing will never be perfect.

The floors of coolers should always be kept sprinkled with clean sawdust, as this will absorb drippings and assist in keeping the cooler clean and sweet. If the drippings from hogs are allowed to fall on the bare floor, the cooler will soon become sour and this will affect the meat that hangs over it.

TEMPERATURE FOR CURING MEAT.

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An even temperature of 38 degrees Fahrenheit is the best temperature for curing meats. Most butchers, however, have no ice machine, and, therefore, are not able to reach such a low temperature in their coolers; nevertheless, they should try to get their coolers as low in temperature as possible, and should at all times be careful to keep the doors closed, and not leave them open longer than is necessary at any time. The temperature of 37 to 39 degrees Fahrenheit is what should govern all packers who use ice machines; those who are fortunate enough to have ice machinery should never allow the cooler to get below 37 degrees, nor above 40 degrees. Many packers let the temperature in their coolers get too cold, and in winter during the very cold weather, the windows are sometimes left open, which allows the temperature to get too low. This should always be avoided, as meat will not cure in any brine, or take salt when dry salted, if stored in a room that is below 36 degrees Fahrenheit. If meat is packed even in the strongest kind of brine, and put into a cooler, which is kept at 32 to 33 degrees of temperature, and thus left at this degree of cold for three months, it will come out of the brine only partly cured. The reason for this is the fact that meat will not cure and take on salt at such a low temperature, and as the temperature herein given is above freezing point, which is 32 degrees, the meat will only keep for a short time, and then it starts to decompose when taken into a higher temperature. Anyone, who is unaware of this fact, will see how necessary it is to have accurate thermometers in a cooler, to examine them frequently, and to closely watch the temperature of the room. See illustration of our Standard Cold Storage Thermometer on page 298.

The first essential point to watch before putting meat into brine, is to be absolutely certain that it is properly chilled through to the bone. Those who are not equipped with ice machinery for properly chilling meat in hot weather must spread the meat on the floor after it is cut ready for packing, and place crushed ice over it for 24 hours, to thoroughly chill it before it is packed in the salt. This will get the temperature of the meat as low as 36 to 38 degrees Fahrenheit before

putting it in the brine. It is necessary that small butchers, who have no ice machines, and rely upon the ice box for a cooler, should use the greatest care to see that the meat is well and thoroughly chilled.

Thousands of pounds of meat are spoiled yearly simply for the one reason that the temperature of the meat is not brought down low enough before the meat is salted. In the summer, hams and heavy pieces of pork should never be packed by persons having no ice machine, unless the meat is first put on the floor for at least twelve hours with broken ice to thoroughly cover it. If our directions are carefully followed and **Freeze-Em-Pickle** is used, such a thing as spoiled meat will be unknown.

CONDITION OF MEAT BEFORE CURING.

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When cured meat turns out bad, it is not always the fault of the man who has charge of the curing so much as it is the condition the meat was in when put into the brine to cure. Good results should not be expected from a man who has charge of the curing unless the meat is delivered to him in proper condition. Hogs should never be killed the same day of purchase at the Stock Yards or from the farmer. They ought to remain in the packing house pen for at least 24 hours before killing. If different lots of hogs are mixed together, they will sometimes fight, which greatly excites them. Whenever they show this fighting disposition, they should be separated.

THE TEMPERATURE OF BRINE.

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Make all Pickle in the cooler, and have the water or brine of as low a temperature as the cooler when it is put on the meat. Try to have the temperature of the brine not over 38 degrees Fahrenheit when putting it over the meat. A great deal of meat is spoiled in curing by having the brine too warm when the meat is put into it.

GIVE CLOSE ATTENTION TO DETAILS.

Be careful to do everything right as you go along, for if you spoil the meat you will hardly become aware of it until it is too late to remedy your error.

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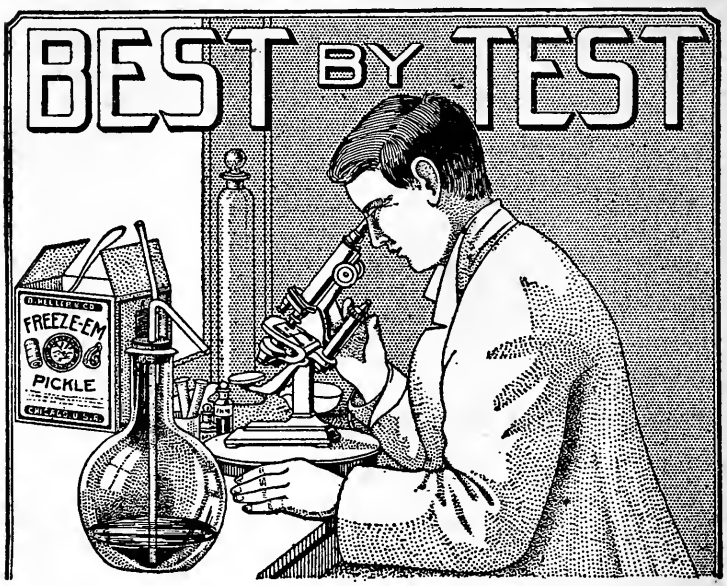

WITH THE FREEZE-EM-PICKLE PROCESS ANYONE CAN CURE MEAT.

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Bacterial action causes great annoyance and loss to Curers of Meats and Sausage Manufacturers, and, since the enactment of Pure Food Laws prohibiting the use of antiseptic preservatives, the proper handling of meats has become a matter of the greatest importance if good sausage and well-cured meats are to be obtained.

We have acted as Consulting Experts for the large Packers and Sausage Manufacturers for many years, and have formulated and systematized methods for the curing of all kinds of meats and the making of all kinds of sausage. We have crystallized the results of our large experience into a plan for the proper curing of meats and the making of all kinds of sausage, which we designate as the Freeze-Em-Pickle Process.

We have also combined the necessary curing agents for this Process into a combination which is always uniform and which is known as Freeze-Em-Pickle.

Freeze-Em-Pickle furnishes to the Packer, Butcher and Sausage Maker the Purest and Best of Materials,

scientifically and accurately compounded, and by using it according to the Freeze-Em-Pickle-Process, which is set forth in this book, any man, whether he is experienced or not, will get as good results as the most expert packer in the business.

If the Freeze-Em-Pickle Process is followed, and Freeze-Em-Pickle is used according to the directions given in this book, the meats and sausage will always be uniform and of the finest quality. They will have a beautiful color, a most delicious flavor and they will comply with the requirements of all the Pure Food Laws.

By curing meat by the Freeze-Em-Pickle Process, the albumen in the meat is so congealed that only a small percentage of it will be drawn out of the meat into the brine, and the natural flavor of the meat is retained, making it far more palatable and digestible.

When Freeze-Em-Pickle is dissolved in water with the proper quantity of sugar and salt, the brine will be decidedly sweet and of the proper specific gravity to properly cure Hams, Bacon, Shoulders, Corned Beef, Dried Beef, etc., with a Most Delicious Flavor, without any loss from spoiling. The Meat will not be too Salty, but will have that Peculiar Sugar-Cured Flavor which is so much liked by everyone. By the use of the Freeze-Em-Pickle Process anyone can make the finest cured meats, whether or not they have ever had any previous experience in the curing or handling of meats.

Packers, Butchers and Curers have many difficulties in turning out good, sweet-pickle cured meat, owing to their inability to obtain the proper curing ingredients. Besides, their methods of curing are frequently incorrect and unscientific.

By adopting the Freeze-Em-Pickle Process, the proper ingredients are used and the meat is handled in the right way. That is why the finished products made by the Freeze-Em-Pickle Process are so much superior to what they are when made in any other way.

In making Bologna and Frankfort Sausage, if the sausage meat is cured for a few days with Freeze-Em-Pickle and handled according to the Freeze-Em-Pickle Process of curing Bologna and Frankfort Sausage Meat, it will produce much Finer Sausage, in both taste and appearance, and will have a Beautiful Color and will not spoil in hot weather, within a reasonable length of time, and the sausage will comply with all the Pure Food Laws.

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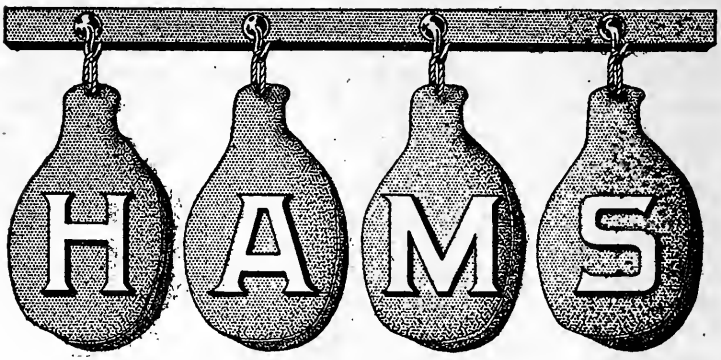

DIRECTIONS FOR CURING HAMS.

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Use the following proportions of Freeze-Em-Pickle, Salt, Sugar and Water to obtain the best results in curing Hams:

Small Hams, 8 to 14 Lbs. Average.

Use for 100 lbs. Small Hams.
- 9 lbs. of Common Salt.
- 1 lb. of Freeze-Em-Pickle.
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 50 to 60 days.

Medium Hams, 14 to 18 Lbs. Average.

Use for 100 lbs. Medium Hams.
- 10 lbs. of Common Salt.
- 1 lb. of Freeze-Em-Pickle.
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 60 to 70 days.

Heavy Hams, 18 to 24 Lbs. Average.

Use for 100 lbs. Heavy Hams.
- 11 lbs. of Common Salt.
- 1 lb. of Freeze-Em-Pickle.
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 75 to 80 days.

First:—Sort the Hams, separating the Small, Medium and Large.

Second:—Take enough of any one size of the assorted Hams to fill a tierce, which will be 285 lbs.; then thoroughly mix together in a large pail or box the following proportions of Freeze-Em-Pickle, Granulated Cane Sugar and Salt:

More than 285 lbs. of Hams can be packed in a tierce, but this never should be done, as it requires a certain amount of brine to a certain amount of meat, and by placing 285 lbs. of fresh Hams in a standard tierce, the tierce will hold 14 to 15 gallons of brine, which is the proper quantity of brine for this amount of Hams. If too much meat is put into the tierce, it will not hold enough brine to properly cure the meat.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets.

Use, for 285 lbs. of **Small Hams,** 3 lbs. of Freeze-Em-Pickle, 6 lbs. of best Granulated Sugar and 27 lbs. of Salt.

For 285 lbs. of **Medium Hams,** 3 lbs. of Freeze-Em-Pickle, 6 lbs. of best Granulated Sugar and 30 lbs. of Salt.

For 285 lbs. of **Heavy Hams,** 3 lbs. of Freeze-Em-Pickle, 6 lbs. of best Granulated Sugar, and 33 lbs. of Salt.

HOW TO CURE HAMS IN OPEN BARRELS.

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When the tierces or barrels in which these Hams are cured are not to be headed up, but are left open, use half of the Freeze-Em-Pickle, Granulated Sugar and Salt required for curing the meat in the following manner:

First:—Take a perfectly clean tierce and sprinkle a little of the mixed Freeze-Em-Pickle, Granulated Sugar and Salt on the bottom of the tierce.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets. When adulterated sugar is used, the brine becomes thick in two weeks; but when Pure Cane Sugar is used it will last quite a while, depending upon the conditions under which the brine is kept.

Second:—Rub each Ham well with some of the mixture of Freeze-Em-Pickle, Granulated Sugar and Salt and pack them nicely in the tierce. Put clean boards over the tops of the hams and weight or fasten these boards down so as to keep them under the brine.

Third:—Take all of the mixed Freeze-Em-Pickle, Granulated Sugar and Salt that is left after the rubbing and use it in making the brine; it will require 14 to 15 gallons of brine, as tierces vary some, for

each standard size tierce of Hams. Make the brine by dissolving in about 14 gallons of cold water all of the mixed Freeze-Em-Pickle, Granulated Sugar and Salt that is left after the rubbing. Stir well for a minute, until it is dissolved, then pour this brine over the meat. As tierces vary so much in size, it is always best to dissolve the Freeze-Em-Pickle in a little less quantity of water, say about 14 gallons for a tierce. After this brine is added to the meat, should the tierce hold more, simply add cold water until the tierce is full. The right amount of Salt, etc., has already been added; now simply add sufficient water to well cover the meat.

When curing a less quantity than a full tierce of Hams, cut down the amount of Freeze-Em-Pickle, Granulated Sugar and Salt and the quantity of water, according to the quantity of Hams to be cured.

QUANTITY OF BRINE TO USE FOR CURING 100 LBS. OF HAMS.

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Five gallons by measure, or forty-two pounds by weight, is the approximate amount of water to use for every 100 lbs. of Hams.

A tierce, after being packed with 285 lbs. of meat, will hold about 14 to 15 gallons of water. When curing Hams in vats, or open barrels, whether in small or large quantity, always use no less than five gallons of brine to every 100 pounds of meat, as this makes the proper strength and a sufficient brine to cover the meat nicely.

THE USE OF MOLASSES AND SYRUP BARRELS IN CURING HAMS.

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Never use old molasses barrels, or syrup barrels for curing meat, unless they have been first thoroughly scoured and steamed, and cleansed with our **Ozo** Antiseptic Washing Compound. It is best to use oak tierces, and always be sure that they are perfectly clean and sweet before putting the meat into them to cure.

PUMPING HAMS.

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We strongly recommend the pumping of Hams, full directions for which are given on page 76.

SHAPE OF VATS IN CURING HAMS.

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Sometimes, vats of certain shapes require more brine to cover the meat than others, and in such cases, a proportionate amount of **Freeze-Em-Pickle,** Sugar and and Salt, should be added to the necessary amount of water to make sufficient brine to cover the meat.

HOW TO OVERHAUL HAMS WHEN CURING IN OPEN PACKAGES.

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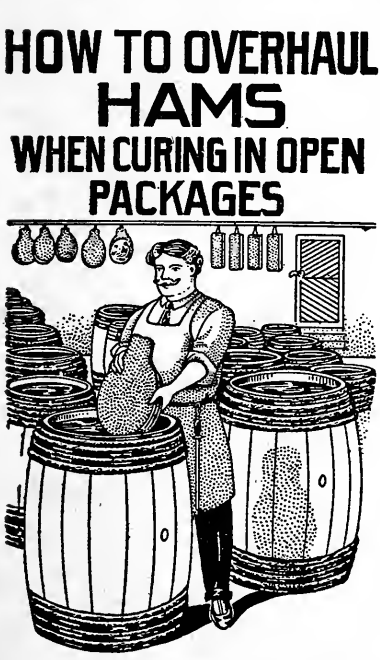

On the fifth day after packing each lot of Hams, it is necessary that they should be overhauled. This must be repeated seven days later; again in ten days; and a final overhauling should be given ten days later. Overhauling four times while curing, and at the proper time in each instance, is very important and must never be forgotten, especially when curing with this mild, sweet cure. Overhauling means to take the Hams out of the brine and to repack them in the same brine. The proper way to overhaul is to take a perfectly clean tierce, set it next to the tierce of Hams to be overhauled, pack the meat into the empty tierce, and then pour the same brine over the meat.

HOW TO CURE HAMS IN CLOSED UP TIERCES.

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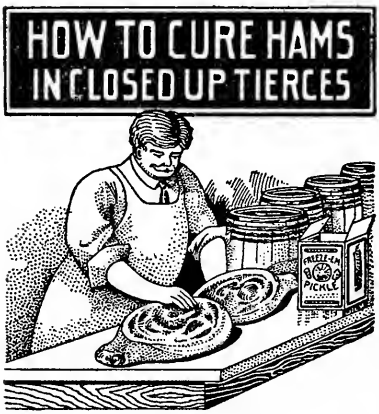
Large packers, who employ coopers, should always cure Hams in closed up tierces, as this is the best method known.



FIRST.—

First: — Mix the proper proportions of **Freeze - Em - Pickle,** Sugar and Salt for the different size Hams to be cured. These proportions are given in the foregoing table, under the heading, "Small Hams, Medium Hams, Heavy Hams." If the tierces are to be headed up, use half of the **Freeze-Em-Pickle,** Sugar and Salt for rubbing the Hams, and the half that is left over, after the Hams are rubbed, should be dissolved in the water which is to be used to fill the tierces. Rub each Ham well before packing; put only 285 lbs. of meat in each tierce, and then head them up.

SECOND.—

Second: — Lay the tierces on their sides and fill them through the bunghole with water in which the half of **Freeze-Em-Pickle,** Sugar and Salt left over after rubbing, has been dissolved.

THIRD.—

Third:—Insert the bung and roll the tierces. This will mix and dissolve the **Freeze - Em - Pickle,** Sugar and Salt rubbed on the meat. Where the pieces of meat press tightly against each other or against the tierce, the brine does not act on the meats; but if the meats are properly rubbed with the mixture of **Freeze-Em-Pickle,** Sugar and Salt before being packed in the tierce, such surfaces will be acted upon by the undissolved mixture, so that curing will be uniform, and no portion of the piece will be left insufficiently cured even if the brine does not come in contact with it. For this reason, it is important that each piece should be carefully rubbed with the mixture of **Freeze-Em-Pickle,** Sugar and Salt before being packed in the tierce.

FOURTH.—

Fourth: — Overhaul five days after packing; again seven days later; again in ten days, and once more ten days thereafter. At each overhauling, examine each tierce for leaks; if any of the Pickle has leaked out, knock the bung in and refill. Remember to overhaul four times during the period of the first thirty-two days.

Fifth: — Overhaul the Hams in closed up tierces, simply by rolling the tierces from one end of the cooler to the other. They ought to be rolled at least 100 feet.

Sixth:—See paragraph on temperature for curing meat, page 46.

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DIRECTIONS FOR CURING SHOULDERS.

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New York Shoulders:—Have shank cut off above knee, trimmed close and smooth, and square at the butt.

California or Picnic Hams are made from Medium and Heavy Shoulders, well-rounded at the butt, and trimmed as near to the shape of a Ham as possible.

Boston Shoulders are made from Light Shoulders, well-rounded at the butt, similar to California Hams.

California and Picnic Hams and **Square Cut Butts,** are cured in the same way, and with the same brine, the only change being in the strength of the brine and the time of curing, which must be made to suit the size of the Shoulder.

Small Shoulders.

Use for 100 lbs. Small Shoulders.

- 9 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 50 to 60 days.

Medium Shoulders.

Use for 100 lbs. Medium-Shoulders.
- 10 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 60 to 70 days.

Heavy Shoulders.

Use for 100 lbs. Heavy Shoulders.
- 11 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 75 to 80 days.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets.

First.—Sort the Shoulders, separating the Small, Medium and Large.

Second.—Take enough of any one size of the assorted Shoulders to fill a tierce, which will be 285 lbs.; then thoroughly mix together in a large pail, or box, the following proportions of **Freeze-Em-Pickle,** Sugar and Salt:

Use for 285 lbs. of **Small Shoulders,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of best pure Granulated Sugar, and 27 lbs. of Salt.

For 285 lbs. of **Medium Shoulders,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of best Granulated Sugar and 30 lbs. of Salt.

For 285 lbs. of **Heavy Shoulders,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs of best Granulated Sugar, and 33 lbs. of Salt.

Curing Shoulders in Open Packages.

When it is desired to cure Shoulders in Open Packages, use the foregoing proportions and in every way handle the Shoulders as directed for Hams, on page 51.

Quantity of Brine for Curing 100 Lbs. of Shoulders.

The same quantity of brine should be used for curing Shoulders as directed for Curing Hams, full directions for which will be found on page 52.

Quantity of Shoulders to Cure in Each Tierce.

The same quantity of Shoulders and the same amount of brine should be used as directed for Curing Hams, on page 52. The same remarks with regard to the variation in the amount of brine for each tierce, and how to be sure to have the proper amount of the right strength of brine, apply in curing Shoulders, the same as for Hams (see page 52). Likewise the use of Syrup and Molasses barrels for Curing Shoulders.

How to Overhaul Shoulders When Curing in Open Packages.

It is important to follow the same directions for Overhauling Shoulders that are given for Overhauling Hams. (See page 53.)

How to Cure Shoulders in Closed Up Tierces.

Follow the same directions for Curing Shoulders as given for Curing Hams in Closed Up Tierces, on page 54.

How to Overhaul Shoulders When Cured in Closed Up Tierces.

Follow exactly the same instructions as are given for Overhauling Hams when cured in Closed Up Tierces, on page 55.

Pumping Shoulders.

Pump Shoulders as directed on page 76.

BONELESS BOILED SHOULDERS.

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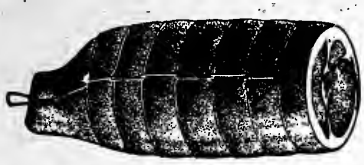


Boneless Rolled Shoulders should be made in the following manner: Take the Shoulders from hogs that have been properly chilled and bone them. If the meat has been thoroughly chilled, so it is perfectly solid and chilled throughout, the Shoulders are ready to cure; but if the meat is not perfectly solid and firm on the inside, where the bone has been removed, the Shoulders should be spread out in the cooler on racks for 24 hours, until the meat is thoroughly chilled and firm.

Small Boneless Rolled Shoulders.

Use for 100 lbs. Small Boned Shoulders.

- 9 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Best Granulated Sugar.
- 5 gallons of Cold Water.
- Cure in this brine 30 to 40 days.

Medium Boneless Rolled Shoulders.

Use for 100 lbs. Medium Boned Shoulders.

- 10 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Best Granulated Sugar.
- 5 gallons of Cold Water.
- Cure in this brine 40 to 50 days.

Large Boneless Rolled Shoulders.

Use for 100 lbs. Large Boned Shoulders.

- 11 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Best Granulated Sugar.
- 5 gallons of Cold Water.
- Cure in this brine 50 to 60 days.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets.

First:—Sort the Boneless Shoulders, separating the Small, Medium and Large, as the different sizes should be cured in separate barrels.

Second:—Take enough of any one size of the Boned Shoulders to fill a tierce, which will be 285 lbs. Then thoroughly mix together, in a large pail or box, the following proportions of **Freeze-Em-Pickle,** Sugar and Salt:

Use for 285 lbs. of **Small Boneless Shoulders,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Best Granulated Sugar and 27 lbs. of Salt.

Use for 285 lbs. of **Medium Boneless Shoulders,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Best Granulated Sugar and 30 lbs. of Salt.

Use for 285 lbs. of **Large Boneless Shoulders,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Best Granulated Sugar and 33 lbs. of Salt.

Third:—After the Shoulders have been weighed, take for example that one has 285 lbs. of **Medium Boneless Shoulders,** averaging, boned, about 10 lbs., which would make 28 pieces for a tierce of 285 lbs. Now, take the 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Granulated Sugar and 30 lbs. of Salt to be used for the tierce of **Medium Shoulders,** and mix together thoroughly in a box or tub.

Fourth:—Rub about ¼ lb. of this mixture in each Shoulder where the bone has been removed, then roll it and tie it in the regular way. After it is rolled and tied, rub about ¼ lb. of the mixture all over the outside, and pack the Shoulders into the tierce. After the 28 **Boneless Shoulders** have been packed nicely into the tierce, put clean boards over the top of the meat and weight or fasten down these boards, so as to keep them under the brine.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets. When adulterated sugar is used the brine becomes thick in two weeks, but when Pure Cane Sugar is used it will last quite a while, depending upon the conditions under which the brine is kept.

Fifth:—Take all of the mixed **Freeze-Em-Pickle,** Granulated Sugar and Salt that is left after rubbing the meat, and use it in making the brine. It will require between 14 and 15 gallons of brine, as tierces vary somewhat in size, for each standard size tierce of Boneless Shoulders. Make the brine by dissolving in about 14 gallons of water all of the mixed **Freeze-Em-Pickle,** Granulated Sugar and Salt that is left after rubbing. As tierces vary so in size, it is always best to dissolve the **Freeze-Em-Pickle,** Sugar and Salt in a less quantity of water, say about 14 gallons for a tierce. After this brine is added to the meat, should the tierce hold more, simply add cold water until the tierce is filled. The right amount of **Freeze-Em-Pickle,**

Sugar and Salt has already been added, now simply add sufficient water to well cover the meat.

In curing a less quantity than a full tierce of **Boneless Rolled Shoulders,** cut down the amount of **Freeze-Em-Pickle,** Granulated Sugar and Salt and the quantity of water, according to the quantity of Boneless Shoulders to be cured.

Quantity of Brine for Curing Less Than 100 Lbs. of Boneless Rolled Shoulders.

The same directions should be followed in curing less than 100 lbs. of Boneless Rolled Shoulders as are given for Hams, on page 52.

The Use of Molasses and Syrup Barrels in Curing Boneless Rolled Shoulders.

The remarks concerning the use of these barrels in curing Hams apply with equal force to the curing of Boneless Rolled Shoulders, and we refer to page 52.

Shape of Vats for Curing Boneless Rolled Shoulders.

See page 52 concerning the Shape of Vats for curing Hams, as the same remarks apply in curing Boneless Rolled Shoulders.

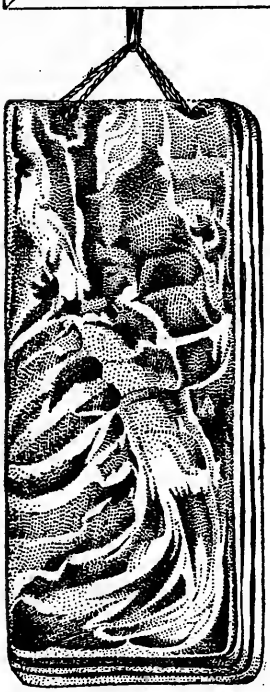
How to Overhaul Boneless Rolled Shoulders When Cured in Open Packages.

See page 53 and follow the same instructions for overhauling as are given for overhauling Hams when curing in open packages.

Pumping Boneless Rolled Shoulders.

This should not be neglected. See page 76 and follow the directions closely. The Pumping of Boneless Rolled Shoulders is very important, because when they are Boned and Rolled, most of the outside surface is covered with Rind, which prevents the Brine from getting through to the meat. However, by rubbing the inside of the Shoulder with the Curing Mixture and then Pumping them before Curing, good results will always be assured.

SUGAR CURED BREAKFAST BACON



DIRECTIONS FOR MAKING SUGAR CURED BREAKFAST BACON.

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Light Bellies.

Use for 100 lbs. Light Bellies.
6 lbs. of Common Salt.
1 lb. of **Freeze-Em-Pickle.**
2 lbs. of Granulated Sugar.
5 gallons of Cold Water.
Cure in this brine 20 to 25 days.

Heavy Bellies.

Use for 100 lbs. Medium or Heavy Bellies.
8½ lbs. Common Salt.
1 lb. of **Freeze-Em-Pickle.**
2 lbs. Granulated Sugar.
5 gals. Cold Water.
Cure in this brine 25 to 40 days, according to size.

First:—Mix together the proper proportions of **Freeze-Em-Pickle,** Sugar and Salt, as stated above for every 100 lbs. of Bellies.

Second:—Take a perfectly clean tierce, tub or vat, and sprinkle a little of the mixed **Freeze-Em-Pickle,** Granulated Sugar and Salt on the bottom. The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets. When adulterated sugar is used, the brine becomes thick in two weeks; but when Pure Cane Sugar is used, it will last quite a while, depending upon the condition in which the brine is kept.

Third:—Take half of the mixed **Freeze-Em-Pickle,** Granulated Sugar and Salt and rub each piece of Belly

with the mixture and then pack as loosely as possible.

Fourth:—Put clean boards over the top of the Bellies and fasten or weight the boards down so as to keep them covered with the brine.

Fifth:—All of the mixed **Freeze-Em-Pickle,** Granulated Sugar and Salt that is left after rubbing the meat should be used for making the brine.

Sixth:—For each 100 lbs. of Bellies packed in the tierce, tub or vat, add not less than 5 gallons of brine, and pour it over the meat. Five gallons of water by measure or forty-two pounds by weight, will make sufficient brine to cover, and is the proper amount for each 100 lbs. of Bellies.

Seventh:—Before putting the water over the Bellies, dissolve in it the mixed **Freeze-Em-Pickle,** Sugar and Salt left after rubbing; stir it for a few minutes until it is thoroughly dissolved, and then pour this brine over the Bellies.

Eighth:—Bellies must be overhauled three times while curing—once on the fifth day; again seven days later, and again in ten days more. Overhauling must never be neglected, if good results are desired.

Overhauling means to take the meat out of the brine and repack it in the same brine. The proper way to overhaul is to take a perfectly clean tierce or vat, set it next to the tierce or vat of Bellies to be overhauled, pack the meat into the empty package and then pour the same brine over the meat.

PUMPING BREAKFAST BACON.

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Many Packers pump Breakfast Bacon when it is put into the brine, and we can heartily recommend this, as Bacon that is properly pumped will be cured in one half the time and it will have a uniform cure and color throughout and will be as well cured on the inside as the outside. Great care, however, should be exercised in making the pumping pickle. It must be made according to the formula given on page 76, just the same as for Pumping Hams. The pieces of Bacon should be pumped in from three to five places, according to the size of the piece. Very large pieces, especially if the rib is left in them, can be pumped several times more.

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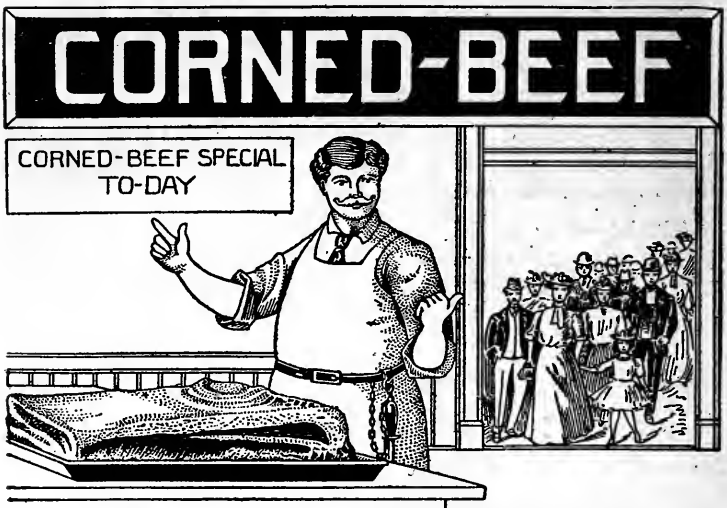

FEW BUTCHERS REALIZE

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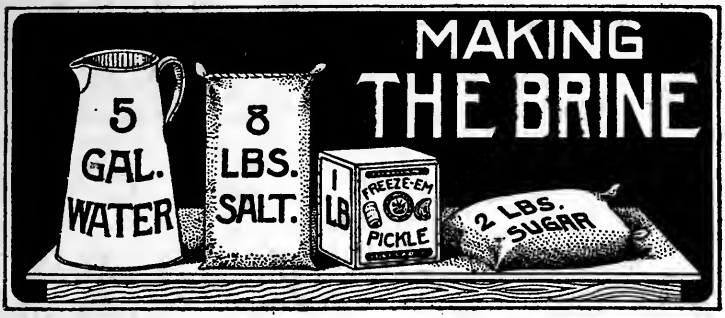
Few Butchers realize the importance of building up a reputation on good Corned Beef. A good trade on Corned Beef enables the dealer to get higher prices for Plates, Rumps, Briskets and other cuts which otherwise would have to be sold at a sacrifice. Corned Beef cured by the **Freeze-Em-Pickle** Process will have a Delicious Corned Beef Flavor, a Fine, Red, Cured-Meat Color, and **will not be Salty.**

To obtain the best results in curing Corned Beef, it is always advisable to first soak the meat for a few hours in a tub of fresh cold water to which a few handfuls of salt have been added. This will draw out the blood which would otherwise get into the brine. The membrane on the inside of the Plates and Flanks should be removed and the Strip of Gristle cut off the edge of the Belly Side.

If any part is **tainted, mouldy, discolored** or **slimy, it must be trimmed off,** so no slimy or tainted parts will get into the brine. If Plates or Briskets are to be rolled, a small amount of mixed Zanzibar Brand Corned Beef Seasoning, **Freeze-Em-Pickle,** Sugar and Salt must be sprinkled on the inside before rolling them. This will give the meat a **Delicious Flavor** and **a Nice Red Color** and will cure it more uniformly and quickly.



DIRECTIONS FOR MAKING FINE CORNED BEEF.

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Use for 100 lbs. Plates, Rumps, Briskets, etc.

- 8 lbs. of Common Salt.
- 1 lb. **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Cane Sugar.
- 6 to 8 ozs. Zanzibar Brand Corned Beef Seasoning.
- 5 gals. of Cold Water.

Cure the meat in this brine 15 to 30 days, according to weight and thickness of the piece.

Retail Butchers who cure Corned Beef in small quantities, and who from day to day take out pieces from the brine and add others, should make the brine and handle the Corned Beef as follows:

To every five gallons of water add eight pounds of common salt, one pound of **Freeze-Em-Pickle** and two pounds of granulated sugar. In summer, if the temperature of the curing room or cooler cannot be kept down as low as 40 degrees, then use one pound of sugar for five gallons of water. If the cooler is kept below 40 degrees, use two pounds of sugar. In winter the curing can always be done in a temperature of 36 to 38 degrees, and then two pounds of sugar to five gallons of water should always be used. The sugar must be **pure cane sugar** and not sugar made from sugar beets. When adulterated sugar is used, the brine becomes thick in two weeks, but when pure cane sugar is used it will last quite a while, depending largely upon the conditions under which the brine is kept.

GALVANIZED IRON CURING TANKS.

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Galvanized iron tanks or vats are far the best for use of either retail or wholesale dealers for curing Corned Beef and all kinds of Pickled Meats. They do not become "pickle-soaked" and are much more easily kept clean and in an antiseptic condition, which keeps the brine from souring. Brine will keep sweet much longer in galvanized iron tanks than in wooden tanks or barrels and the results in curing meats are much more satisfactory when galvanized iron tanks are used. Another advantage which the galvanized iron tank has is that it can be kept tightly covered, which prevents dirt, dust, flies, and sometimes mice and rats, etc., from getting into the brine.

HOW TO KNOW WHEN CORNED BEEF IS NOT FULLY CURED.

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If a piece of Corned Beef is cut, before or after it is cooked, and the inside is not a nice red color, it is because the meat is not cured through. It is often sold in this condition, but it should not be, as it does not have the proper flavor unless it has been cured all the way through, which requires two or three weeks in a mild brine, depending upon the size of the piece of meat. Corned Beef pickled for four or five days in a strong brine, with an excessive amount of saltpetre in it, as some butchers cure it, **is not good Corned Beef** and **does not have the proper flavor,** although it may be red through to the center, the color being due to the large amount of saltpetre used in the brine.

The **Freeze-Em-Pickle Process** of curing gives the meat a different flavor from meat which has been cured in the old way.

PUMPING CORNED BEEF.

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We recommend Pumping Corned Beef with a Pickle Pump, before it is put into the brine. In this way the meat is cured in about half the time and it will be cured from the inside just the same as from the outside, and will be more uniform in color throughout than if cured without pumping. If Corned Beef is pumped, it should be pumped with the same pickle as for pumping Hams, formula for which is given on page 76. The pieces of Corned Beef should be pumped in from two to four places, according to the size of the piece of meat. One will soon become accustomed to it, after pumping a few pieces. Pumping can of course be overdone, and too much brine must not be pumped into the meat; otherwise it will puff out too much and become spongy.

GARLIC FLAVORED CORNED BEEF.

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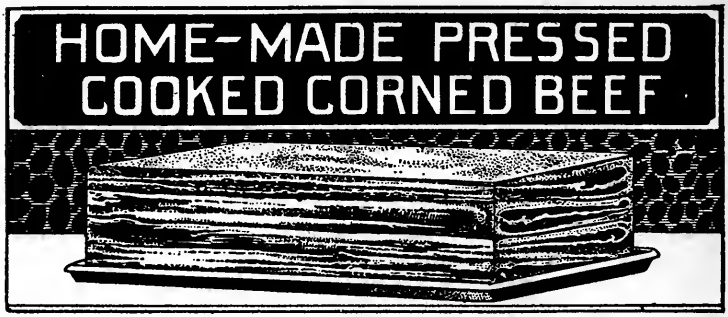
Many people like Garlic Flavor in Corned Beef, and butchers who want to please their customers should keep a supply of Corned Beef both with and without the Garlic Flavor. We make a special preparation, known as Vacuum Brand Garlic Compound, with which butchers are able to give a Garlic Flavor to any kind of meat, without leaving any of the objectionable features that result from the use of fresh Garlic.

Vacuum Brand Garlic Compound is a powder which we manufacture from the very best selected Garlic. The flavor given by it is delicious, and the advantages gained by it will be thoroughly appreciated by all who use it.

B. HELLER & CO.



DIRECTION FOR MAKING COOKED CORNED BEEF.

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Take fully cured Corned Beef and cut it up into different sizes, and pack it nicely into a cooked corned beef press, sprinkling a little Zanzibar Brand Corned Beef Seasoning between each layer of meat so as to give it a delicious flavor. All Butchers' Supply Houses sell presses made especially for this purpose. After packing the pieces of Meat into the press, screw it up tight; then put the press which has been filled, into hot water, of a temperature of 180 F., and leave it there for one and a half hours, then reduce the temperature to 170 degrees and leave it there for one hour longer. A very large press might require three hours cooking before the meat would be cooked through. After the meat is thoroughly cooked, place the press in the cooler and let it remain there over night. The following morning the Corned Beef will be thoroughly chilled and can be taken out of the press.

In the summer it is a good plan to dip the cake of Cooked Corned Beef, after it is removed from the press, into Hot Lard for a second, or even Hot Tallow. This will coat it so it will not become mouldy, and it will keep much better than without dipping it.

Pressed Cooked Corned Beef is an elegant article, is a good seller and very often women would be only too pleased to be able to buy this from the butcher and would be willing to pay good prices for it if they could only obtain it. Butchers should give more attention to preparations of this kind, as they would help greatly in developing business.

DIRECTIONS FOR MAKING FANCY DRIED BEEF.

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How to Cure Beef Hams and Shoulder Clots.

SMALL PIECES.

Use for 100 lbs. Small Beef Hams and Shoulder Clots.

- 9 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 50 to 60 days.

MEDIUM PIECES.

Use for 100 lbs. Medium Beef Hams and Shoulder Clots.

- 10 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 60 to 70 days.

HEAVY PIECES.

Use for 100 lbs. Heavy Beef Hams and Shoulder Clots.

- 11 lbs. of Common Salt.
- 1 lb. of **Freeze-Em-Pickle.**
- 2 lbs. of Granulated Sugar.
- 5 gals. of Cold Water.
- Cure in this brine 75 to 80 days.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets.

First.—Sort the Beef Hams and Clots, separating the Small, Medium and Large.

Second.—Take enough of any one size of the assorted Beef Hams and Clots to fill a tierce which will be 285 lbs.; then thoroughly mix together in a large pail or box, the following proportions of **Freeze-Em-Pickle,** Sugar and Salt:

Use for 285 lbs. of **Small Beef Hams and Small Clots,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of best Granulated Sugar and 27 lbs. of Salt.

For 285 lbs. of **Medium Beef Hams and Medium Clots,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Granulated Sugar and 30 lbs. of Salt.

For 285 lbs. of **Heavy Beef Hams and Heavy Clots,** 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of best Granulated Sugar and 33 lbs. of Salt.

Curing Beef Hams and Clots in Open Barrels.

Follow exactly the same instructions as given for curing Hams in Open Packages, page 51.

Quantity of Brine for Curing 100 Lbs. of Beef Hams and Clots.

Use the same quantity of Brine and the same amount of Beef Hams and Clots as directed for curing Hams, on page 52. The same remarks apply as to variations in the size and shape of vats, and in the general handling, as given for Hams.

How to Overhaul Beef Hams and Clots When Curing in Open Packages.

Overhaul and handle exactly as directed for Hams, on page 53.

How to Cure Beef Hams and Clots in Closed Up Tierces.

Follow the same directions in every way as given for curing Hams in Closed Up Tierces, page 54.

How to Overhaul Beef Hams and Clots When Cured in Closed Up Tierces.

Follow exactly the directions for overhauling Hams when cured in Closed Up Tierces, given on page 55.

Pumping Beef Hams and Clots.

Follow the general directions for Pumping, which will be found on page 76.

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Take 100 lbs. of boneless Beef Plates and cure them in brine made as follows:

5 gallons of cold water.
8 lbs. of common salt.
1 lb. of **Freeze-Em-Pickle** and
2 lbs. of granulated sugar.

Cure the Plates in this brine 10 to 30 days in a cooler. The temperature should not be higher than 42 to 44 degrees Fahrenheit, but 38 to 40 degrees temperature is always the best for curing purposes.

The 5 gallons of brine should be flavored by placing in it about 6 to 8 ounces of Zanzibar Brand Corned Beef Seasoning. After the meat has been fully cured in accordance with the above directions, sprinkle some Corned Beef Seasoning on the meat; then roll the meat and tie it tight with a heavy string. The meat should then be boiled slowly.

Rolled Spiced Beef should be boiled the same as hams, in water that is 155 degrees Fahrenheit.

This Rolled Spiced Beef is sold to customers raw as well as boiled. Many prefer to buy it raw and boil it at home. This style of Corned Beef makes a beautiful display on the counter and butchers will find this a profitable way of working off fat plates. Meat worked up in this way brings a good price and is a ready seller. Those liking Garlic Flavor can also add a small quantity.

GENERAL HINTS FOR CURING MEATS.

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Curers of meat, who are well acquainted with us know that we have been in a position to acquire more knowledge in the curing and handling of meats than anyone in the United States. As is well known, we have been consulting chemists and packing house experts for many years; therefore, the general information which we offer for curing meats are suggested by the results of many years of practical experience.

CHILLING MEATS.

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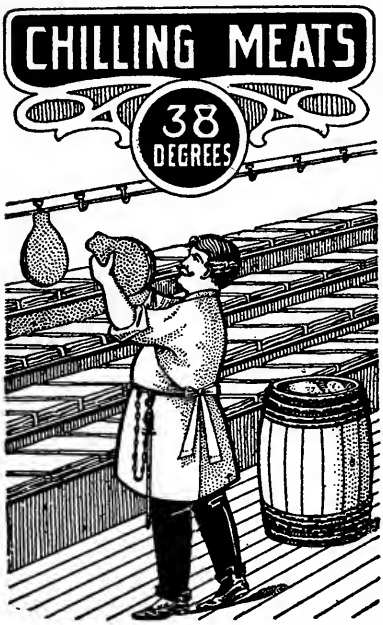

Hams, Shoulders, Bellies and other cuts must be thoroughly chilled before they are put into pickle. From one to two days before being packed, depending upon the temperature, they should be hung up or laid on a rack in the cooler, in order to draw out all the animal heat that is in them and to make them firm and ready for packing. Packers, using ice machinery for cooling, can bring the temperature low enough during the warm weather to properly chill the meat; however, it must not be frozen. If the cooler in which meats are chilled is not cold enough to make the Hams, Shoulders, Bellies, etc., firm and solid in 48 hours, it is advisable to lay the meat on the floor over night and place crushed ice over it; this will harden the meat.

Those using a common ice house can employ the crushed ice method, which is to spread the meat on the floor and throw cracked ice over the meat, allowing it to remain over night. It should always be remembered that if meat is put into brine soft and spongy, it will become pickle-soaked and in such condition will never cure properly. It will come out of the brine soft and spongy, and will often sour when in the smoke house. A great deal of meat spoils in curing only for the reason that the animal heat has not been removed before the meat is packed and placed in brine. When the animal heat is all out of the meat, the meat will be firm and solid all the way through. In order to get the best results, the inside temperature of Hams and Shoulders when packed, should not be over 36 to 38 degrees Fahrenheit. The meat should be tested with a thermometer made for this purpose before it is packed. Every curer of meat should have one. An illustration of same will be found on page 300.

OVERHAULING.

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When curing Hams, Shoulders, and all kinds of sweet-pickled meats in open vats, overhauling is a very important feature; it must be done at least four times during the curing period. When curing in closed up tierces, the tierces must be rolled at least four times during the curing period. Bellies must be overhauled at least three times while curing in open vats, and if cured in closed up tierces, they must be rolled at least three times during the curing period. This overhauling is very necessary because it mixes the brine and changes the position of the meat in such a way that the brine gets to all parts of it.

HOW TO BOIL HAMS.

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Heat the water to 155 degrees Fahrenheit. Then place the hams in the hot water and keep them in it from eight to nine hours, according to the size of Hams. Try to keep the water as near to 155 degrees as possible. By cooking Hams in a temperature of 155 degrees, very little of the fat will cook out of them and float on top of the water, and the Hams will shrink very little. When Hams or large pieces of meat are boiled for slicing cold, allow them to remain in the water until it is nearly cold, for by so doing the meat re-absorbs most of the nutriment which has been drawn out during the cooking process. Then put them in a cooler over night, so that they will become thoroughly chilled before slicing. Hams should never be cooked in boiling water, which is 212 degrees Fahrenheit, as this is so hot that most of the fat will melt and run out of them.

USING BRINE TWICE.

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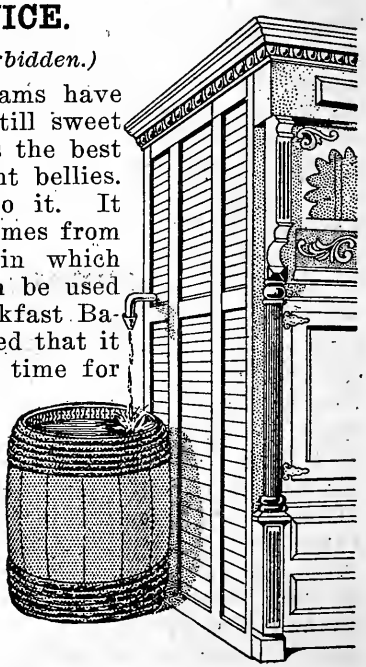
The Pickle, in which Hams have been cured, but which is still sweet and not stringy or ropy, is the best brine in which to cure light bellies. Nothing need be added to it. It should be used just as it comes from the Hams. While brine in which Hams have been cured can be used once more for curing Breakfast Bacon, it should be remembered that it must not be used a second time for curing Hams or Shoulders.



ICE WATER.

Never use the drip water of melted ice from a cooler for making Pickle, as it contains many impurities, and therefore should never be used.

PUMPING MEATS.

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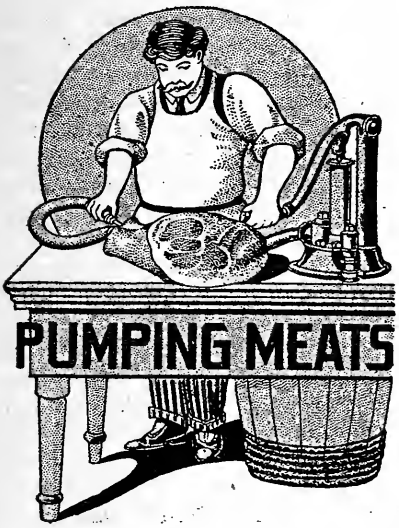

We highly recommend pumping Hams, Shoulders and other kinds of Cured Meats. It is a safeguard in Hams and Shoulders against shank and body souring, should they, through some carelessness, be insufficiently chilled all the way to the bone, and is a protection against sour joint, and insures a uniform cure. It is also of great advantage to pump Breakfast Bacon, Corned Beef, Dried Beef, Dry Salt Meats, etc. Packers and curers, who do not use a pump and the **Freeze-Em-Pickle** Process, are suffering losses from sour meats, which during a year's business would mean a large profit to them.

There is a mistaken idea among many butchers and packers that pumping Hams and Shoulders is injurious to the meat. The facts do not warrant such a belief, as the best cured and the best flavored meats are those that have been pumped. When Hams and Shoulders are not pumped, it requires weeks for the pickle to penetrate through to the bone, which is the vital spot of a Ham or Shoulder. If the joints, tissues and meat around the bone are not wholly and thoroughly cured, the entire Ham or Shoulder is inferior and no good; because it furnishes a favorable seat for the development of the germs of putrefaction, which render the meat unfit for human food.

In order to always have a mild cure, sweet flavor at the joints, and uniform color, they should be pumped. Pumping with the **Freeze-Em-Pickle** Process is a safeguard against shank and body souring; it gives the inside of a Ham or Shoulder a delicious flavor, a good color, and insures a uniform cure; it cures the joints

and the meat around the bone thoroughly, and greatly reduces the period of curing. The secret and principal feature in pumping Hams and Shoulders, is to have the right kind of pumping brine. When common brine, or ordinary sweet-pickle is used for pumping, the Hams or Shoulders usually become pickle-soaked, and if the refrigerator under such conditions is not the very best, or if the Hams or Shoulders are not thoroughly chilled, the smallest degree of animal heat which may be remaining in them will start fermentation, causing the meat to sour next to the joints. It is, therefore, plain to be seen that pumping, under such conditions, instead of doing good, will in reality result in injury, and this is the reason why so many who have tried pumping meats have failed. On the other hand, when the pumping brine is made as shown herein, all of these objections are overcome, and the meat will not be pickle-soaked, nor will it become soft and flabby. The brine will be absorbed by the meat around the bone and joints so thoroughly as to leave no trace of it after the Ham is cured; it also gives the inside meat a beautiful red color, and a delicious flavor. Hams that have been pumped with **Freeze-Em-Pickle** and cured by the **Freeze-Em-Pickle** Process, will not dry up and become hard when fried or cooked; when sliced cold they will not crumble, but will slice nicely and have a most delicate and pleasing flavor.

DIRECTIONS FOR PUMPING.

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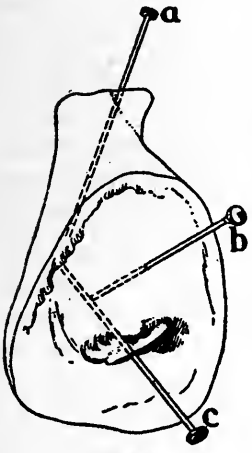
One gallon of pumping brine is sufficient for pumping one tierce, or 285 lbs. of meat. Make the pumping brine as follows:

½ lb. of **Freeze-Em-Pickle.**
2 lbs. of Pure Granulated Sugar.
3 lbs. of Salt.
1 gal. of Water.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets. When adulterated sugar is used, the brine becomes thick and would spoil the meat in two weeks. Stir the above thoroughly before using. As this will make a thick brine which is more than saturated, it will precipitate when left standing, therefore, when mixed in large quantities, it should be stirred occasionally. Meats

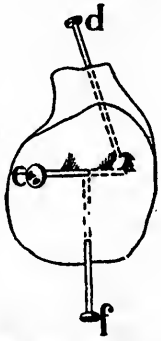
should never be pumped with anything but a solution that is thoroughly saturated.

Pump the Hams or Shoulders just before they are packed, and if it is desired to rush the cure, pump them every time that the meat is overhauled. The pumping solution must be cold when pumped into the meat. Ordinarily, three insertions of the needle in the Hams are sufficient; once at the shank to the hock joint as shown at A, once to the thigh and along the bone, Fig. B., and once from the butt end to the joint under the hip bone and into the fleshy part. Fig. C. Solid lines show needle up to point of insertion and dotted line shows direction taken by needle after insertion. In a very heavy Ham as many as six insertions should be made, and the same with very heavy Shoulders. Three insertions of the needle into a medium size Shoulder are sufficient; one at Fig. D, one to the shoulder joint at Fig. E, and one under the blade from the end, or diagonally from the back of the shoulder toward the end at Fig. F.



HAMS

More insertions may be made without injury to the meat, but the above are all that are required for good results. One cubic inch of solution is enough for each insertion, and after withdrawing the needle, the hole must be squeezed shut with the thumb to prevent the solution from oozing out. Stir the solution well before starting to pump. The Pumper must be careful not to pump air into the meat. Never allow the Pickle to go below the end of sucker of pump.



SHOULDERS

USE ONLY PURE SUGAR.

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The importance of using pure cane sugar without any adulteration, in sweet-pickling Meats, must not be overlooked. The very best and purest article of granulated cane sugar should always be used if the best results are expected. As is well known, sugar is a great nutrient, and economizes the use of proteids in food. As a food, sugar possesses the fuel value of starch, and is much more readily digested; therefore, the use of pure sugar assists in the digestibility of meat. On the other hand, the adulterants of sugar are fermentatives; they retard digestion and counteract the nutrient values of meat. They destroy the alkalies with which pure cane sugar forms definite compounds; their effects upon the brine is to make it slimy and ropy. The brine, therefore, becomes less penetrative, and sour meat is the natural result. The very effect which pure sugar produces by its chemical combination with salt, and which contributes to the sweetness of the meat, is entirely lacking in sugar adulterants; necessarily, fermentation, the contrary effect, sets in, which destroys and disintegrates the albumen in the cells of the meat. The coagulation of the albumen, which should and does take place in all well preserved meats, is entirely lacking, and cannot take place with impure and adulterated sugar to counteract the effect of curing agents. Therefore, use only the best **pure granulated cane sugar** in making all sweet-pickle. A simple test for the purity of sugar can be made with water or alcohol. The pure article when made into a solution of either water or alcohol will show up clear and transparent; when kept in large and well closed and completely filled bottles such a solution will not deposit a sediment even after a period of long standing. Following are the scientific methods for testing the purity of sugar:

TEST FOR PURE SUGAR.

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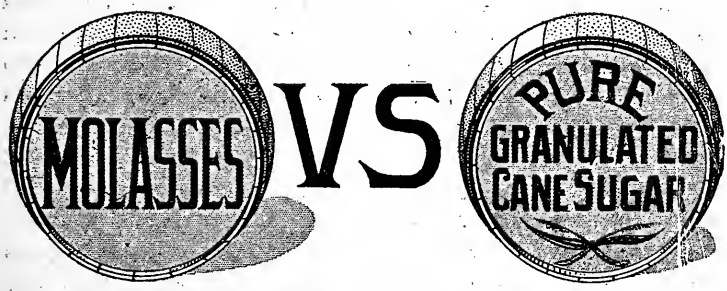
If 1 Gm. of sugar be dissolved in 10 C.c. of boiling water, the solution mixed with 4 or 5 drops of silver nitrate test-solution, then about 2 C.c. of ammonia water added, and the liquid quickly brought to the boiling point, not more than a slight coloration, but no black precipitate, should appear in the liquid after standing at rest for five minutes. Cane sugar may be distinguished from grape sugar by what is known as the Trommer's test, which consists in the use of Copper Sulphate and Potassa. If a solution of cane sugar be mixed with a solution of Copper Sulphate, and Potassa be added in excess, a deep blue liquid is obtained which on being heated lets fall, after a time, a little red powder. A solution of grape sugar similarly treated, yields by heat, a copious greenish precipitate, which rapidly changes to scarlet and eventually to dark red. When a liquid containing grape sugar is boiled with Sodium Carbonate and some Basic Bismuth Nitrate, a great coloration or blackening of reduced Bismuth is produced. Cane sugar, similarly treated, has no effect on the test.



MOLASSES VS. SUGAR.

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We have been asked why we so strongly urge the use of pure granulated cane sugar in sweet-pickle curing and ignore the use of molasses and syrup. The part performed by saccharine substances in curing meats is not fully understood by many. While pre-

servative in character, they are not used for preserving purposes only, but also as a flavor. So it is necessary that all flavors used in curing should be preservatives and also that they should unite with and exchange their molecules with the molecules of other agents used in curing. Pure Granulated Cane Sugar performs this function in a greater degree than either molasses or syrup. Sugar, while itself a preservative, by its combination with salt subverts the affinities of fermentation, and it thus adds to the penetrative qualities of the brine. Molasses performs this function in a less degree, while syrup, depending upon the quantity of glucose, or invert sugar, which it contains, has much of its effect destroyed before chemical action takes place. In syrup, the flavor is obtained without the effect; in molasses, the effect is obtained without the flavor. In Pure Cane Sugar, both flavor and effect are obtained.

The effect of molasses, but especially syrup, upon brine is a tendency to make it ropy. In making this point, we do not claim that all molasses will produce such result, as much of it is pure and wholly devoid of deleterious substances. There is nothing, however, to recommend the use of molasses. Granulated sugar is always preferable owing to the definite chemical changes which take place between Pure Granulated Cane Sugar and the other curing agents during the process of curing. That this interchange of molecules means very much in the final results of curing, is beyond question, and that article is always the most economical which produces the most dependable results. When molasses or syrup fails to form a chemical compound with other curing agents, the salt loses its full effect upon the meat, the albumen does not coagulate, but is drawn out of the cells, the meat becomes pickle-soaked and the brine becomes slimy and ropy. Molasses, and syrup particularly, should be eliminated from curing when the best results are desired. Pure granulated cane sugar should take their place because it is most economical, because it imparts a better flavor, and because it assists in making the brine more penetrative.

ROPY OR STRINGY BRINE.

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ROPY BRINE

Occasionally brine that has been made with sugar will become ropy and thick like jelly, but yet will be somewhat stringy. This is called "Ropy Brine," and can always be traced to either the use of unsuitable sugar or improper temperature of the curing room.

Beet Sugar and Glucose Sugar will never do for curing meat. It must be Cane Sugar, and the Refined, Granulated Cane Sugar is the best, because the impurities have been taken out.

However, even if Pure Granulated Cane Sugar is used and temperature of the Curing Room is too high, the brine is liable to turn "Ropy" anyway. It is, therefore, absolutely necessary for anyone who intends to cure meat in sweet brine, to use the proper kind of sugar and cure in the proper temperature. Otherwise, the results will not be satisfactory, no matter what kind of a curing agent is used.

In buying sugar for curing purposes, it is advisable to order it from the wholesale grocers or from the manufacturer, and have it guaranteed to be Pure Granulated Cane Sugar put up Especially for Preserving Purposes. This grade of sugar is on the market and is used for preserving fruits, and is the best kind of sugar to use for curing meats.

If brine has become ropy in a curing package and it is desired to use that package again, it is absolutely necessary to thoroughly scald out such package, and it is well to use Ozo Antiseptic Washing Compound for that purpose, so as to destroy the germs of fermentation which are sure to be in the pores of the wood. Otherwise, the unclean package will cause the fresh brine to turn "Ropy," even though it is made with the right kind of sugar and kept in the proper temperature.

BOILING THE BRINE.

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Boiling the brine improves it some, but not enough to pay for the extra trouble it makes. We recommend boiling the water, if one has the time, as it purifies it. When there is reason to believe that the water is impure, or when it is known to be tainted with vegetable matter, the brine should always be boiled, and the impurities will then float on the surface, and can be skimmed off.

CLEANSING CURING PACKAGES.

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All curing packages should be taken out of the cooler after the meat has been cured in them, and scalded and washed thoroughly clean with hot water and **Ozo.** Soda or Soda-ash may also be used, but the best results will be obtained with **Ozo,** which is a thoroughly Antiseptic Washing Powder, and kills all germs which come in contact with it. Where Soda or Soda-ash is used, the packages are simply cleaned, but are not disinfected. When **Ozo** is used, however, the packages are not only cleansed and purified, but are also sterilized and disinfected. When packages have been thoroughly cleaned, they should be put out in the sun and allowed to remain there for a day or two. The sun will thoroughly dry them, and the fresh air will leave them sweet and pure.

SOME CAUSES FOR SOUR HAMS.

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Sour Hams are sometimes caused by hanging warm meat in the same room in which the meat is cured. This should never be done. The warm carcasses raise the temperature of the curing room, thus causing the brine to get too warm. Under such conditions the meat is liable to sour in the brine. Furthermore, the brine is liable to absorb the odors from the warm carcases, which of course is very objectionable.

Many suppose that Hams sour from getting too much smoke, but such is never the cause, as Hams will not sour from over-smoke. Smoke aids to preserve Hams and cannot cause them to sour. When Hams sour in the Smoke House the cause must be traced to the fact that they are not properly and fully cured before going into the Smoke House, and the portion that has not been thoroughly cured, which is generally close to the bone, has not been reached by the brine. In many cases, souring comes from imperfect chilling of meat before putting it into the brine; then again, the meat may not have been overhauled at the proper time and with the frequency which good curing requires.

In order to prevent souring of Hams the various stages of curing must be carried out with the utmost care. In the first place, hogs should not be killed when overheated or excited, and after they have been scalded and scraped, they must be dressed as quickly as possible, washed out thoroughly with clean water and then split and allowed to hang in a well ventilated room until partly cooled off. They should then be run into a cooler or chill room as quickly as possible and the temperature should be reduced to 32 to 34 degrees Fahrenheit. They should be allowed to thus chill for 48 hours. When hogs are properly chilled after curing, the temperature of the inside of the Ham or Shoulder will not be more than several degrees higher than the cooler. After being thoroughly chilled, the Hams must undergo the various processes which will be found in other pages of this book which give directions for the curing of Hams and Shoulders. When these directions are closely followed, there will never be trouble from sour Hams.

HAMS AND SUPERIOR HAMS.

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There seems to exist some doubt in the minds of butchers as to whether one Ham can be cured to better advantage than another, basing their opinion upon the fact that all packers have two grades of Hams, one of which is called of superior quality. Doubt has been expressed as to whether one piece of meat taken from the hog will make any better pork than that taken from another. This doubt should not obtain and could hardly exist in the minds of anyone who has carefully investigated the modern methods of packing. If such a person were to stand by the side of a Ham trimmer in a packing house and examine each Ham as it comes from the trimmer, he would be at once convinced as to the error of his opinion. There would be noticed a vast difference in the quality of Hams, even in their fresh state. Many Hams are of very coarse grain, especially those that come from boars, stags and old sows, while many other Hams are large and too fat. Those that come from poor, scrawny hogs are too small and thin, and this differentiation exists regardless of the grade or the experience in buying different lots of hogs. Perhaps there is no animal which varies so much in quality and condition of meat as the hog, and he fully represents or reflects the quality of the food from which he is made, or the results of wise or unwise feeding. Furthermore, Hams will vary in quality even after they have been graded; some medium size Hams, which is the size usually picked for the finest cure, are of much better quality than others. This will be readily admitted when it is remembered that a Ham may be of proper weight, but it can also be too fat for its weight, it can be too lean, it can have a coarse thick skin, the meat can be coarse in grain or it may be properly graded as to size, but come from an old, worn-out sow. Under such circumstances, it is not only necessary to cull the Hams, but to recull them, until the different grades are divided as to quality.

A fourteen to sixteen pound Ham from a young barrow with a fine, thin, white skin which is not too fat or not too lean, and possessing a nice, fine grained meat is fully up to grade and is taken for the superior quality of Hams. Therefore, a Ham of this description is superior in quality even before it goes into the brine for curing, and it is very easy to understand that when such a quality of Ham is carefully cured, for just the proper length of time, it will be far better than the ordinary run of Hams. Furthermore, the quality of the Hams may be deteriorated in many ways. For instance, the fourteen to sixteen pound Ham is fully cured in from sixty to seventy days, but if a packer has put up a large quantity of better grade Hams which gives him a surplus, he will hold them in the brine from ten to twenty days longer after they have been fully cured, and if they are thus kept in the brine for this additional period, they may become too salty and their fine flavor is lost. Under such circumstances the Hams must be taken out of the brine and smoked, or must be stored in a low temperature for ten or twenty days longer, but the moment they are kept beyond the full curing time they are not as good as when taken out of the cure at the moment they are fully cured. Furthermore, if a large quantity of the superior quality of Hams have been smoked and they are not disposed of rapidly enough, they begin to lose in appearance, and must again be culled and sold with the cheaper grade of Hams. If they are kept in brine longer than is necessary, they must also go into the cheaper quality.

It is, therefore, plain to be seen that what is known as the superior quality is the best Ham that the packer can turn out. As stated, the Hams are superior before they are cured. They are properly kept all through the process of curing, and the moment they are fully cured they are taken out, smoked and sold. It is only by handling Hams in this manner that it is possible to maintain a grade of superior quality. All Hams cannot be handled in this way, owing to the fluctuation of supply and demand, but the packer aims to keep them fully up to superior grade by a frequent and discriminating culling. This should convince anyone in doubt upon this question that they are erroneous in supposing that all hams are alike, and that all hog meat is pork, when, in fact, it has various grades of quality.

HOW TO SMOKE PICKLE-SOAKED MEAT.

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It sometimes happens that butchers leave their Hams in brine too long and they become pickle-soaked. Once in this pickle-soaked condition, it is well known that it is a very difficult matter to smoke the Hams, because, even though they are sweet when they go into the Smoke House, they will come out sour. Hams should not be left in brine over ninety days, and at the very outside not more than one hundred days, unless they are put into a freezer and kept at a temperature of 28 degrees, at which they can be kept as long as desired. But it is frequently the case that they are left in pickle five or six months in an ordinary cooler. Hams thus over-pickled cannot fail to cause trouble in the Smoke House, and we would advise that all Hams that have been left in the brine for such a long time should be washed off in warm water after first letting them soak in cold water 2 to 4 hours. They should then be hung up to dry and kept in a well ventilated room where the temperature is not too high. A room in which the circulation of air is good and which can be well ventilated by opening the windows and doors, and which does not rise in temperature above 60 to 70 degrees, would answer the purpose for drying out. It will do no harm to let the Hams hang two or three weeks before smoking. They can then be put in the Smoke House and smoked gently, using as little heat as possible. For the purpose of this light smoking, it is best to use sawdust instead of wood, or mostly sawdust, and a small amount of wood, in order to reduce the heat. The Smoke House should also be constructed in such a way that it can be sufficiently ventilated to let cool air into it and thus make sure of a cool smoke. If Hams are smoked under such conditions, they should come out of the Smoke House without souring.

The souring of pickle-soaked Hams is due to the brine fermenting in the Hams when they are placed in the warm Smoke House. Hence the advisability of drying out the Hams well before placing them in the Smoke House, and of smoking them in a cool smoke. When Meat has been in brine a very long time and has become pickle-soaked, and is afterward soaked in cold water, the greatest of care must be taken not to

keep it in cold fresh water too long, otherwise the meat will absorb more moisture. It is also a good plan to soak Meat in cold water that has been in brine 60, 70 or 80 days. When Hams are fully cured, the strength of the brine may be reduced somewhat, after which the Hams may be permitted to remain in the brine about 30 days longer. Hams are fully cured in 70 days, and may be allowed to remain in a weaker brine 30 days longer, but no longer. After 30 days they must be taken out of this reduced brine, and, if it is so desired, they may be kept in a low temperature two or three weeks longer before smoking, but at the end of that time they must be smoked.

CLEANING LARD TIERCES FOR CURING PURPOSES.

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As is well known, Butchers experience a great deal of trouble when they use second-hand lard tierces for curing meats, owing to the fact that the lard soaks into the pores of the wood, where it becomes tainted and rancid. No amount of washing or scalding will thoroughly disinfect such tierces or make them as good as new. The lard is run into the tierces while it is hot and the fat naturally soaks very deeply into the wood. After these tierces are emptied and are used for curing purposes, the old lard remains in the pores and becomes rancid and contaminates the brine and also the meat.

It is a fact that many Butchers use old lard tierces for curing purposes and neglect to thoroughly clean them; and even if they have been well cleaned, it is well known that, notwithstanding every precaution taken, there is still left in the tierces a taint which affects the flavor of the meat.

To sweeten and thoroughly disinfect lard tierces so they may be used for curing purposes, make a fire on the inside of the tierce, with paper, so that the lard adhering to the inside of the barrel will catch fire; then lay the tierce down and roll it slowly, so the entire inside of it will catch fire. Let it burn until the staves are pretty well charred, then turn the tierce bottom-side-up, which will extinguish the fire and leave the smoke on the inside of the tierce; leave the tierce in this position until it is cool.

By this simple method, tierces which have contained lard can be made sweet and may be used for curing any kind of meat.

WHY BONE SCRATCHES CAUSE BLOOD POISON.

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Butchers very often have severe running sores as a consequence of small bone scratches, scratches from saw teeth, from nails or hanging hooks which have been in contact with meat or fat for some time. The reason that such slight injuries may produce serious consquences is as follows:

The air is full of all kinds of disease germs. These germs develop and multiply very rapidly when they are brought in contact with a suitable material on which to develop. Albumen, such as is contained in fresh meats of all kinds, is the most favorable material for their growth and development that exists. As soon as a beef is killed, on all portions of the carcass that remains moist, millions of these germs settle and begin to breed. Within a very short time, these germs have multiplied and have become teeming colonies of the various kinds of germs causing disease. Now, in case, for instance, the back bone of a beef which has been exposed to the air has a sharp fragment of bone projecting from it and this splinter either pierces the skin or makes a scratch on the butcher's hand: In such case, if the wound is not given immediate and proper attention, all the conditions necessary for the development of a case of blood poisoning are present, or it may be one of the milder forms of germ invasion which would only produce a festering and troublesome sore. In any case, it would only depend upon which germ was the predominating one in this particular piece of bone or saw tooth. or

other agent by which the scratch was received.

Butchers are so constantly exposed to this kind of danger that they should always keep at hand the proper materials for immediately sterilizing such wounds, which consists in the application of such material as will reach and destroy all such germs without injuring the exposed tissues. If such wounds are properly and promptly attended to, they will heal very quickly and will never produce either blood poison nor the unsightly sores which are such an annoyance and cause so much suffering to many butchers. The proper method of handling all scratches, cuts or other injuries received in butcher shops, or around where meats are handled, is as follows:

First.—Dissolve one teaspoonful of **Asepticine** in a pint of hot water and thoroughly wash the injury with this Antiseptic Solution. Endeavor to remove by this washing and bathing all the fragments of bone, dirt, dust, etc., from the wound, and to have this solution reach all the surfaces of the wound, particularly the bottom of the scratch, cut, etc. Then spread **Purple-ine Ointment** on a piece of muslin sufficiently large to cover the injury and for a considerable area all around the injury, and apply this, slightly warmed, to the surface. Next, cover this with a piece of absorbent cotton and wrap up with a bandage, so the dressing will remain in place. This dressing should be changed twice a day, so as to remove any fragments of bone or dust that might have been neglected in the washing, also whatever slough is necessary to be separated in order for perfect healing. When the dressing is changed, if there be any pus or other discharge, the wound should always be washed with a solution of Asepticine, made up in proportions of one teaspoonful to the pint of hot water, followed by a fresh dressing of Purple-ine.

Wounds treated in this manner will be free from danger, will give very little pain or discomfort, and will heal promptly and thoroughly. Purple-ine is the best salve, that can be produced, for all kinds of discharging wounds or sores. It draws out the products of inflammation, separates and draws out any foreign bodies or poisonous materials, and favors prompt and thorough repair. For particulars concerning Purple-ine and Asepticine, see advertising pages at the back of this booklet.

MEASLY PORK.

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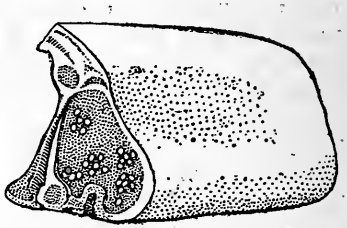

Fig. 1.

This subject is of importance to all butchers, because they should be able to at once recognize the flesh from any animal suffering from this disease, and should take steps to at once destroy the parasites with which it is infested, lest some other animal may become infested and spread the disease indefinitely. The gristly, hardened, light colored blotches in the lean portions of pork from a hog that has been suffering from Measles consist of little cysts or sacs, in which are contained minute Tape Worms, ready for development in any human being that partakes of such pork. See Fig. 1. This variety of tape worm is known as Taenia Solium, and the cysts are known as Cysticercus Cellulosoe. When such pork is eaten by a human being, unless it has been boiled for a sufficient length of time to destroy the life of the egg, the sac walls are digested in the stomach, the warmth of the body causes the rapid development of the worm, which adheres by means of its tentacles to the mucus membrane of the upper portion of the intestine, and a tape worm rapidly develops in the victim, producing any or all of the symptoms that this horrible infection inflicts on its victims.

To recognize a Measly Hog before it is killed is not usually a difficult matter. When a hog is first taken with Measles, the symptoms are much the same as when it is taking Cholera. There is always an eruption; which begins behind the shoulders and extends first along the sides and finally invades the whole body. If the hog is slaughtered while suffering from the acute stage of the disease, it may not have become at all reduced in flesh, but after scalding the skin will be found covered with spots of discoloration, possibly involving the entire body. In the dressed skin, these are bluish or blackish discolorations of the skin, but are not raised above the level of the surrounding skin. If the hog has passed the acute stage, these discolora-

tions will have faded away, but the skin will have pitted and hardened spots all over it, like the hog had been broken out with Smallpox.

In the pork that is cut up, the Measles are found only in the lean meat, and they form small gristles of hardened, whitish shining masses. A butcher who has ever cut on a Measly hog will not need to be told the peculiar feel of his knife being partially arrested by these tough gristly masses, which may be encountered in any of the lean portions of the hog, and in fact are usually well scattered. The appearance of the measly patches in a Pork Loin is very well shown in the illustration Fig. 1. In the next illustration, Fig. 2, the microscopical appearance of a "Measle" after it has been acted upon by the heat of the stomach and the coat enclosing the miniature and developing worm has been partially digested away. It must be remembered that these worms develop rapidly when the cysts enter the stomach, so that within a few hours the sac is digested off and the small tapeworm is on its way to a proper location for its attachment in the small intestine, where some of them have been known to attain a length of sixty feet.

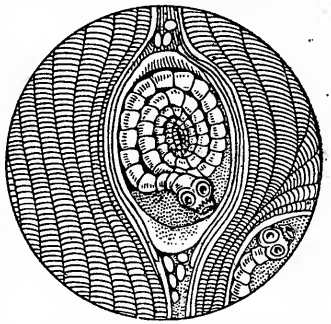

Fig. 2.—Showing young Tape Worm, magnified 500 times.

It is the duty of a butcher whenever he finds that he has a Measly hog on his hands, or any Measly pork, to destroy its danger first by prolonged boiling at a high temperature, so as to entirely and thoroughly kill all the cysts, and then the meat should be destroyed. Otherwise, any animal that eats such meat becomes a danger in the community, because one animal suffering from the disease will throw off infectious material enough to infest many herds of hogs and other animals, by polluting water supplies and contaminating foods that other animals may eat. It must not be forgotten that curing meats does not in any way destroy these eggs. Hams, bacon and other cured meats are in fact the most frequent means by which people acquire Tape Worms, because many people prefer such meats cooked rare.

TRICHINA.

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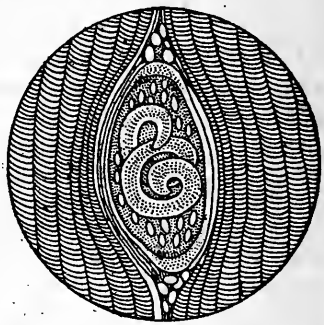

Fig. 3.—Showing the young Trichina magnified 1000 times.

Fig. 3 shows a Trichina encapsuled in a muscle and will give some idea of the appearance of this parasite when imbedded in muscle fibers. The Trichina in hogs does not give such clear evidence of its presence, either in the way of constitutional symptoms or eruption. The deposits are usually where the tendons join the muscles, and may be in any portion of the hog's carcass. The cysts are small, but large enough to be made out as small, glistening, white sacs, hard to the feel, and when cut through they often give a gritty sensation in drawing the knife across them.

The Trichina is also liberated in the stomach by having the sac digested off, and the released parasite, which is like a minute thread, attaches itself in the intestines and begins to throw off spores, which develop, pass through the intestinal way while yet of a microscopic size and find their way to the general circulation, finally being deposited in muscle tissue of the hog at the junction of a tendon and muscle. The muscles of the larynx, in the throat, seems to be a favorite location for these young. The disease when contracted from Trichinous Pork is a very puzzling one, and no treatment offers much relief. Many of its sufferers die early in the disease, and of those who recover many are never restored to perfect health. For this reason, butchers should be always watchful for any evidence of Trichina in pork and should destroy it without hesitation if there is any likelihood of it being infected. Moreover, all pork should always be thoroughly cooked before being eaten, to guard against these diseases.

BRINE ABSORBS FOREIGN ODORS.

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Warm carcasses of meat should never be put into a cooler where meat is being cured in open vats, as the cold pickle will absorb the impure animal heat, and odors which these carcasses give off. Never allow sour pickle of any kind to remain in the curing room, as cold brine or water will absorb all foreign odors. To demonstrate this, take a glass of cold water, set it on a table next to a glass of tainted brine, and cover both with a bucket or pan; allow them to remain over night, and the next morning the cold water will have the same odor as the tainted brine. This will easily prove how meat can be tainted when curing in open tierces or vats, if anything sour or spoiled is in the cooler; therefore, curing rooms must be kept as clean as possible.

HOW TO PURIFY AIR IN COOLER.

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Freshly slaughtered meats hanging in coolers, naturally give off a certain amount of odor. This is very much added to if the drippings are allowed to fall on the floor where they are absorbed and in time undergo decomposition. Great care should be taken to keep the air in coolers sweet and pure, as otherwise meats and other contents of the cooler will absorb enough of the stale and rancid smells to very much lower their quality. In coolers where curing is done, if the air is bad, the odor will be absorbed by the brine, making the meats in cure taste stale and rancid.

Coolers should be thoroughly cleansed as often as possible. The best method of doing this is to use **Ozo Washing Compound** dissolved in hot water, to wash off the floors and walls. This will remove the grease and other soil better than anything else known. Then the entire cooler should be washed out with a solution of Freeze-Em, one tablespoonful to each gallon of hot water. This solution of Freeze-Em will kill all germs of decomposition and their spores. Then, if pos-

sible. the cooler should be thoroughly aired before re-filling.

If these directions are followed, the air in the cooler will always be sweet and pure, free from germs and odor, and meats and other articles of food contained in the cooler will not easily become stale nor absorb odors. The cost is almost nothing and the difference it makes in the keeping of food products will be a surprise to those who have not given it a trial.

DEODORIZING AND DISINFECTING SLAUGHTER HOUSES.

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Especially during warm weather, unless a reliable deodorizer is used on all slaughter-house offal, it will sometimes become very offensive, and easily may become a nuisance in the neighborhood.

Slaughter pens and the floors of dressing rooms should be washed every day as soon after the killing is finished as possible, and nothing will cleanse the floors so thoroughly and quickly as **Ozo Washing Compound.** All floors should be washed off, after being cleansed, with a solution of **Deodorine,** one teaspoonfull to each gallon of hot water. This will quickly destroy all odors and will thoroughly disinfect the premises. All piles of manure and other slaughter-house refuse should be sprinkled freely with the same strength solution of Deodorine, which will prevent the development of foul and offensive odors, which otherwise would develop before such refuse could be removed.

Waste pipes and drains leading from slaughter houses should be flushed at the close of the day's operations, with several gallons of a solution of Deodorine, one to two teaspoonfuls to each gallon of boiling hot water. This will thoroughly disinfect the sinks and sewers leading from the slaughter house, and will prevent the development of unsanitary and disease breeding gases in the sewer mains as well as the waste pipes leading directly from the slaughter house. For a description of **Deodorine** see page 282.

A CHEAP TEMPORARY SMOKE HOUSE.

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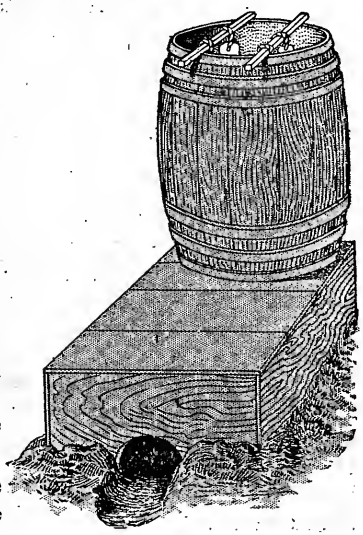

This illustration will give some idea of how a temporary smoke house can be rigged up with very little trouble, which will answer the purpose nicely.

Very often it becomes necessary for a butcher to re-smoke some bologna that has been shipped to him from a packer, and it is sometimes necessary to re-smoke Hams and Bacon. Also, a butcher will often want to cure a small quantity of meat and would like to smoke it.

When butchers who are not equipped with a smoke house have to do this, they may be at a loss to know what to do.

Take a clean sugar barrel and knock out the bottom; then set the barrel on top of a box about four feet long, one or two feet high and as wide as the barrel. If a box of this shape cannot be obtained, a large dry goods box will answer. Bore auger holes through the box under the barrel, to let the smoke through. Get a large piece of tin, galvanized iron or sheet iron, about one foot wide and 2 feet long and bend it into the shape of a pan, or take an old roasting pan. Dig a hole in the ground at the front end of the box, so fire can be put onto this piece of tin, sheet iron or pan and then shoved under the box with the fire on it. After the fire is shoved under the box, place a board over the hole. All crevices must be banked with dirt around the box, to keep the smoke in.

The meats to be smoked should be hung on sticks with long strings on them, so as to let them down to about the middle of the barrel. Cover the barrel up with a gunny sack, so as to let a draft pass through and still retain the smoke in the barrel.

This makes a first class temporary smoke house with very little trouble and expense.

HOW TO KEEP HAMS, SHOULDERS, BACON, DRIED BEEF, AND ALL KINDS OF PICKLED MEATS IN BRINE FOR A YEAR OR LONGER.

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All kinds of pickled meat after it is fully cured, if stored in a cooler in which the temperature is kept down to 28 degrees can be kept in this cooler for a year, or even longer, and when removed will come out similar to fresh cured meat. During the time when Hams and other meats are low in price, they can be stored in a freezer, and kept there until such a time as they are in greatest demand and will sell at the highest price. This enables the packer to reap a larger profit. At a temperature of 28 degrees, the meat will not freeze after it is cured, and the brine of course does not freeze, as salt water will not freeze, at that temperature. When meat is taken out of such cold storage to be smoked, it should first be soaked for three to five hours in fresh water, then washed in boiling hot water and smoked the same as regular fresh cured meat.

WASHING CURED MEAT BEFORE SMOKING.

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Hams, Shoulders, Bacon and all cured meats whether dry salted or cured in brine, should be washed in hot water and scrubbed with a brush before being put into the smoke house. This is very important, as the meat thus scrubbed will come out of the smoke looking much better. The water should be as hot as the men can work with. The hotter the water, the better the meat will look after being smoked.

YELLOW WASHING MEATS.

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There is still some demand for Yellow-Washed Hams. A Yellow-Wash for a packing house should be made according to the following formula:—

500 lbs. of Barytes.
25 lbs. of Rye Flour.
10 lbs. of Pure Chrome Yellow.
20 lbs. of Glue.

This quantity will make enough Yellow-Wash to cover 1,200 to 1,300 Hams, and persons desiring smaller quantities can make the proportions accordingly.

First:—The glue should be soaked over night in cold water and the next day boiled until it is all dissolved.

Second:—Take a large bucket and mix Chrome Yellow in water thoroughly until all the lumps are broken up, then add the 25 lbs. of Rye Flour and sufficient water until the Chrome Yellow and Rye Flour are mixed into a thin creamy paste.

Third:—Put the 500 lbs. of Barytes in the yellow-wash tub and add sufficient water to mix it to the consistency of a thick cream.

Fourth:—Next add the dissolved Flour and Chrome Yellow to the 500 lbs. of Barytes and mix it thoroughly. After it has been well mixed, add the glue and then mix thoroughly again.

If it is convenient to do so, put a steam hose into the yellow-wash and heat it until it begins to boil. This will make a much better yellow-wash than if it is not boiled, but the boiling is not absolutely necessary.

To yellow-wash Hams they should first be wrapped in heavy paper, then sewed in a thin muslin cover. Then dip the covered Hams into the yellow-wash and hang them up. Take a brush and smooth or rub off all the surplus yellow-wash so that it will not run or drip. The labels can be put on while the yellow-wash is soft, but a neater way is to put them on with paste after the yellow-wash is dry.

DRY SALT MEATS.

Short Ribs (Regular) are made from the sides of the hog, between the Ham and Shoulder, having the loin and ribs in, and backbone removed.

Extra Short Ribs are made from the sides of the hog, between the Ham and Shoulder, with loin taken out, but belly ribs left in.

Short Ribs (Hard) are made from the sides of the hog, between the Ham and Shoulder, having the loin, ribs and backbone in.

Short Clears are made from the sides of the hog, between the Ham and Shoulder, having the loin in, and ribs and backbone removed.

Extra Short Clears are made from the sides of the hog, between the Ham and Shoulder with loin and all bones taken out.

Long Clears are made from sides, Ham being cut off, but Shoulders left in, back bone and ribs removed, shoulder blade and leg bone taken out, and leg cut off close to the breast.

Extra Long Clears are made from sides, Ham being cut off, back bone, **loin and ribs** removed. Shoulder blade and leg bone taken out and leg cut off close to the breast.

Short Clear Backs are made from the backs of hogs with the loin left in, but ribs and backbone removed; also known as **Lean Backs** and **Loin Backs.**

Short Fat Backs are made from the fat backs of prime hogs, being free from lean and bone, and properly squared on all edges.

Dry Salt Bellies are made from medium size hogs, cut square and well trimmed on all edges, with ribs left in.

Dry Salt Clear Bellies are made from medium size hogs, cut square and well trimmed on all edges, with ribs taken out.

HOW TO CURE DRY SALT SIDE MEATS.

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First—Thoroughly chill the hogs so they are firm and solid. This will require letting them hang in the cooler after they are killed about 48 hours. Should the sides not be perfectly solid and thoroughly chilled, when cut up, spread them on the floor of a dry cooler for 24 hours, which ought to be long enough in a fair cooler to thoroughly chill them.

Second:—Make a tub of brine, using 15 lbs. of salt and 1 lb. of **Freeze-Em-Pickle** to each 5 gallons of brine.

Third:—Take a pickle pump, and pump some of the above brine into the sides along the backbone, being careful to get it all through the thick part.

Fourth:—Dip the sides into the tub of brine, and then lay them on a table or trough and rub thoroughly with dry salt. They must be dipped in brine, so that the **Freeze-Em-Pickle** will get all over the meat, and so the salt will adhere to the meat.

Fifth:—Clean the floor in the cooler or curing room with **Ozo Antiseptic Washing Compound;** sprinkle the floor lightly with salt; and then pile the sides one on top of the other with the meat side always up. Between each side spread a layer of salt, and see that all parts of the meat are covered with the salt. The more salt put on it, the better.

Sixth:—Five days after salting the sides, shake off the salt, and pump them again in the same manner as when first salting; dip into the vat of brine, and dry salt again; then stack up the same as in the first instance, putting salt between each layer, and repeating this overhauling every ten days until the sides are cured.

HOW LONG TO CURE DRY SALT SIDES.

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Light sides will fully cure in from 30 to 35 days, and should be resalted three times, which with the first salting received by them, will give them four saltings during the curing period. These saltings are given on the first day, the fifth day, the fifteenth day, and the twenty-fifth day.

HOW LONG TO CURE HEAVY DRY SALT SIDES.

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Heavy sides will be fully cured in from 50 to 60 days, according to size, and should be resalted five times during the curing, as follows: The first day, the fifth day, and then every ten days. After 45 days, the meat need not be rehandled, and can then remain in the cooler piled up, as long as one wishes to keep it. It should not be taken out of the cooler, however, until it has been in salt 50 to 60 days, according to the season of the year.

TEMPERATURE OF COOLER FOR DRY SALTING.

Full information as to the temperature of the cooler for dry salting will be found on page 46 under the head "Temperature."

DRY SALT CURING BY BUTCHERS WHO HAVE NO ICE MACHINE.

Small butchers, who have no ice machines, and simply use an ice box for a cooler, must use the greatest care to see that the meat is well chilled before salting, and they must also use plenty of salt. For the special benefit of small butchers, we will say that we fully realize the conditions which surround them, and we are well aware that they cannot get the temperature in an ice box as low as with an ice machine; but nevertheless, they can always cure meat with the **Freeze-Em-Pickle** process, and get better results than they can by curing meat in any other way.

DESCRIPTION OF BARRELED PORK.

Mess Pork is made from the sides of well-fattened hogs, split through the backbone, and cut in strips about six inches wide.

Mess Pork Short Cut is made from the backs of prime hogs, split through the backbone, backbone left in, and bellies taken off; cut into pieces six inches square.

Clear Back Pork is made from the fat part of the backs of prime hogs, being free from lean and bone, even in thickness, and cut into pieces about six inches square.

Family Pork Lean is made from the top of shoulders, when cut into California Hams. It has one-half of the blade bone in, and is about two-thirds fat, and one-third lean.

Clear Bean or Butt Pork is made from the fat cheek or jowl, cut square.

Clear Brisket Pork is made from the Briskets of prime medium weight hogs, ribs removed and pieces cut about five inches wide.

Rib Brisket Pork is made from the Briskets of prime medium hogs, ribs left in, and cut into pieces about five inches wide.

Loin Pork is made from the end of the back next to the Ham, with both lean and fat, and has a portion of the tail bone in.

Pig Pork: Light selected boneless Bellies cut into five inch pieces, trimmed square.

Belly Pork: Selected heavy weight Bellies, cut into five inch pieces, with ribs left in.

Extra Short Clear Pork is made from the sides of hogs, with the loin and backbone removed, and the Belly ribs left in, cut into strips five inches wide, squared at each end.

Lean End Pork is made from selected medium weight Rib Bellies, cut into strips five inches wide.

DIRECTIONS FOR CURING BARRELED PORK.

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Never pack more than 190 lbs. of pork in an ordinary pork barrel.

First:—If it can possibly be obtained, it is always best to use coarse rock salt, or coarse evaporated salt, which is made especially for this purpose; but if coarse salt cannot be obtained, any salt will answer the purpose. In packing it is necessary to use 35 lbs. of salt for each barrel, over and above the salt used in the brine.

Second:—Take a perfectly clean pork barrel, and throw three handfuls of salt on the bottom of the barrel.

Third:—Put in a layer of pork; throw three handfuls of salt over this layer.

Fourth:—Keep packing layer after layer, until the 190 lbs. of pork are packed in the barrel, and while packing put three handfuls of salt over each layer of the pork.

Fifth:—The following are the proper proportions for brine for 190 lbs. of pork: Put 10 gallons of cold water in a keg or tub; dissolve in this water 2 lbs. of **Freeze-Em-Pickle** and 30 lbs. of salt. Stir this well until it is all dissolved, and then pour the brine over the pork which has been packed as above directed.

Sixth:—If the barrels are to be headed up, head up first, and then put in the brine through the bung hole.

TEMPERATURE FOR BARRELED PORK.

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It is necessary that the greatest care should be exercised not to let the pork freeze while curing. Brine for barreled pork will not freeze at the freezing point of water, but the meat in the brine will freeze, and will not cure if the temperature is lower than the freezing point for any length of time. See instructions as to Temperature to be found on page 46

BARRELED PORK NEED NOT BE OVERHAULED.

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Barreled Pork when packed in accordance with these directions with **Freeze-Em-Pickle** and salt, and then stored in a cooler, will never spoil, but will cure with a most delicious flavor. It is not necessary that barreled pork should be overhauled; overhauling is required only for dry-salt and sweet-pickled meats. After the pork is fully cured, which will vary according to the size of the pieces, from 40 to 60 days, the pork can be shipped anywhere, into any hot climate and will remain in perfect condition without spoiling.

Extreme care must be exercised to thoroughly chill the pork before it is packed; if animal heat is left in the pork, it will not cure properly, any more than will hams when they are put into brine, with the animal heat left in them. Good results when curing barreled pork, cannot be expected if the meat is not in proper condition when packed.

DRIPPINGS FROM REFRIGERATING PIPES.

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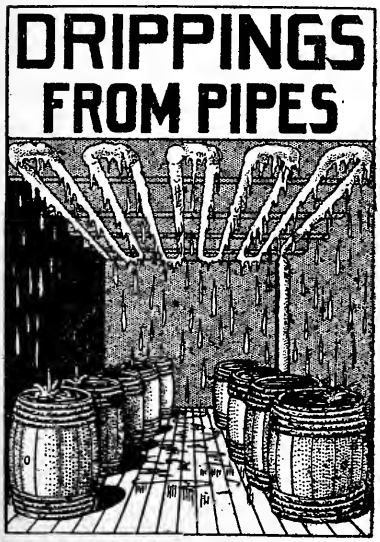

Never allow the drippings from refrigerating pipes along the ceiling, or from ice chambers, to drip into open vats containing meats while curing, as they will reduce the strength of the brine and make no end of trouble.

Keep the cooler as dry and as clean as it possibly can be kept. A damp, dirty cooler breeds millions of germs. These germs affect the brine and the curing of the meat.

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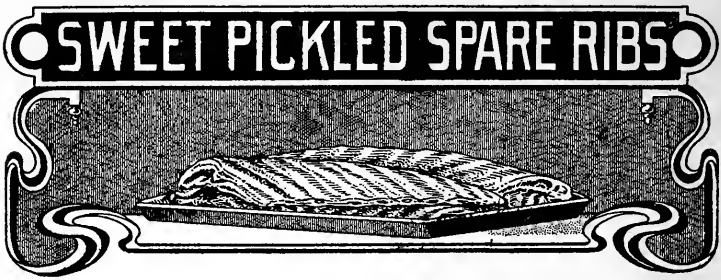

RECIPE FOR CURING SPARE RIBS.

(Copyrighted; Reprint Forbidden.)

For each 100 pounds of spare ribs make the brine as follows: 10 pounds of common salt, 1 pound of **Freeze-Em-Pickle,** 2 pounds of best granulated sugar and 5 gallons of cold water.

Cure in this brine from 10 to 12 days. The temperature of the cooler in which the spare ribs are cured can be anywhere from 36 to 43 degrees, but it should not vary from this range of temperature. It is best to leave the spare ribs in the cure from 10 to 12 days, though they will be cured sufficiently in 7 to 8 days.

If the above method is carefully carried out, the result will be a fine, mild, sweet cure and not too salty.

Before placing the spare ribs in the brine they should be handled in the same manner as hams and shoulders. In other words, they should be rubbed in half of the above quantity of salt, **Freeze-Em-Pickle** and sugar, and the mixed **Freeze-Em-Pickle,** sugar and salt that is left after rubbing should be used for making the brine.

HOW TO CURE BEEF TONGUES.

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First:—Cut the tongues out of the heads as soon as possible, and with warm water scrub off all the slime and dirt, with a stiff brush; hang up in a cooler on a hook at the gullet, to make the tongues thick instead of long and thin.

Second:—Let them hang for at least 24 hours in a cooler.

Third:—When the tongues are thoroughly chilled and firm, cut off the surplus fat and square the tongues at the gullet by trimming off all ragged pieces.

Fourth:—Put them into a strong common salt brine to leach them, and leave them in this brine from 10 to 20 hours.

Fifth:—Take them out of this brine and rub the slime off the tongues and out of the gullet, and also rub the gullet with dry salt.

Sixth:—If only a few tongues are to be cured make a barrel of pickle, as follows, and simply throw the tongues into it: For every 5 gallons of water, add 1 lb. of **Freeze-Em-Pickle,** 2 lbs. of Pure Granulated Sugar, and 9 lbs. of Common Salt.

Seventh:—Where large packers wish to pack tongues in tierces, the tongues should be handled as follows: Weigh out 285 lbs.; then mix together in a box or tub the following:

3 lbs. of **Freeze-Em-Pickle.**

6 lbs. of Best Granulated Cane Sugar.

27 lbs. of Salt.

Eighth:—Rub each tongue with some of this mixture and pack as loosely as possible in the tierce, using about one-half of the mixture of **Freeze-Em-Pickle,** Sugar and Salt for rubbing, and the other half for making the brine. It will require between 14 to 15 gallons of brine to fill the tierces, some tierces vary in size, therefore dissolve the balance of the mixture of **Freeze-Em-Pickle,** Sugar and Salt in about 14 gallons of water, and pour over the tongues, should the tierce hold more simply add enough cold water to cover all the meat as the right amount of salt has already been added.

Ninth:—If the tierces are to be headed up, the heads should be put in, and the brine should be poured into the tierce through the bung hole. The overhauling of tongues is just as important, as is the overhauling of hams and shoulders. They should be overhauled in the same manner, and the same number of times. By reference to directions for curing hams and shoulders, which will be found on previous pages, all the necessary instructions can be followed. To give the tongues a proper flavor, they ought to cure from 50 to 60 days.

GARLIC FLAVORED BEEF TONGUES.

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Many like Garlic Flavored Tongues, and this desire can be fully satisfied by adding about two tablespoonfuls of Vacuum Brand Garlic Compound to each tierce of tongues; add it to the brine before it is poured over the tongues. This will give them a most delicious flavor which will be relished even by people who do not like fresh Garlic.

HOW TO CURE HOG TONGUES.

Hog Tongues should be handled and cured in exactly the same manner as beef tongues. The brine should be made of the same strength and in the same manner, and when so made, it will cure the hog tongues in about 30 days. The directions for curing Beef Tongues can be used for curing Hog Tongues in every particular.

CURING BEEF CHEEKS FOR CANNING.

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First:—The cheeks should be cut out of the head immediately after the beef is killed, all the fat should be trimmed off, and then the cheeks should be twice cut, lengthwise, through the outside muscles.

Second:—They should be then thrown into ice water to which has been added some salt, and they should be allowed to remain there for an hour or two. This will draw out all the slime and blood.

Third:—The cheeks should then be put on a coarse wire screen, or perforated galvanized iron pan placed in a cooler and spread out as thinly as possible, so as to give them a chance to thoroughly chill. A thorough chilling in a cold cooler will require 24 hours.

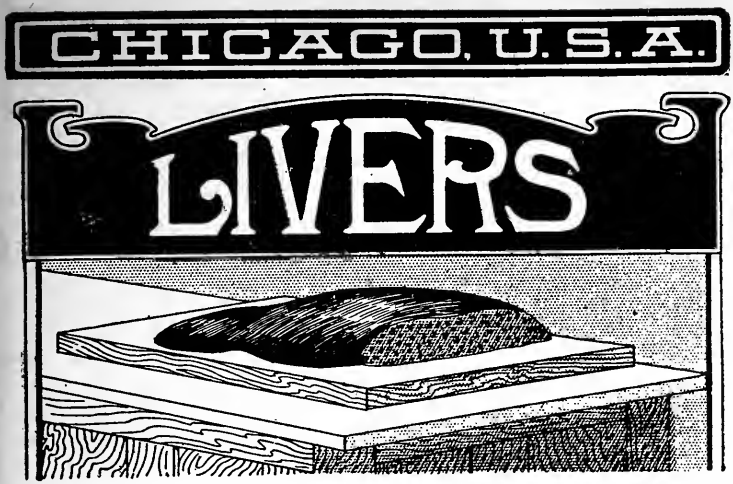
Fourth:—The cheeks should then be salted, and packed into tierces; 285 lbs. should be put into each tierce.

Fifth:—Handle the cheeks as follows: For each 285 lbs., mix in a box or tub, 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Granulated Sugar and 24 lbs. of Common Salt.

Sixth:—Then put 285 lbs. of cheeks on a table and take half of the mixture of **Freeze-Em-Pickle,** Granulated Cane Sugar and Salt and mix it with the cheeks thoroughly; then shovel into tierces.

Seventh:—If the tierces are to be headed up, put the heads in and take the balance of the mixture of **Freeze-Em-Pickle,** Sugar and Salt and dissolve it in 15 gallons of cold water, which pour into the tierces through the bung hole. Insert the bung, and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle,** Sugar and Salt. Overhaul in closed up tierces simply by rolling them from one end of the cooler to the other. They ought to be rolled at least 100 feet.

Eighth:—If the tierces are to remain open, take 15 gallons of water in which dissolve the remaining mixture of **Freeze-Em-Pickle,** Sugar and Salt, and pour this brine over the cheeks; put boards over the top to keep the meat from floating or from coming out of the top of the barrel. At the end of five days after salting, the cheeks must be overhauled and re-handled by transferring them to another tierce with a large fork made for such purpose; this should be repeated every five days, viz., on the fifth day, on the tenth day and on the fifteenth day. After each overhauling, the same brine is always used to pour over the meat. If the cheeks are to be kept for any length of time, they should have another overhauling 25 to 30 days from the day they were packed. Cheek meat slime considerably, making it difficult to cure. When the cheeks are overhauled, if the pickle is thick and ropy, new brine of the same strength as the original brine will have to be made and poured over them, instead of the old brine. The cheek meat must be thoroughly washed in cold water before being put into fresh brine.



CURING HOG LIVERS.

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Cut off plucks and chill livers thoroughly; then pump them in three or four places with a long slender open nozzle, about 3/16 to ¼ inch in diameter, using a pumping pickle made as follows.

1 lb. of **Freeze-Em-Pickle.**
15 lbs. of Common Salt.
5 gal. of Water.

Stick the nozzle of the brine pump into the different veins on the lower side of the livers and pump them until they swell up from the pressure of the brine; then lay them out on a rack for 24 hours in a cooler and allow the blood to ooze out of them.

On the next day after the livers have been pumped, pack them in a 60 deg. common salt brine; nothing else need be added. Those not having a Hydrometer for testing brine can make the brine by dissolving 15 lbs. of salt in 85 lbs. of water, this makes a 60 degree brine. In this way, the livers can be kept for a long time. When pickling livers, it is absolutely necessary that all animal heat should be extracted from them, and that they should be properly chilled and cooled, otherwise, they will not keep.

CURING BEEF LIVERS.

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Cut off plucks and chill livers thoroughly. Pump the curing brine into them in three of four places by using a long slender open nozzle about 3/16 to ¼ inch in diameter, which insert into the different veins on the lower side of the livers. The brine should be forced into them until the pressure swells them up; after pumping them, lay them out on a rack for 24 hours in a cooler and allow the blood to ooze out of them. The pumping brine for beef livers is made the same as the brine for hog livers as follows:

1 lb. of **Freeze-Em-Pickle.**
15 lbs. of Common Salt.
5 gal. of Water.

The day after the livers have been pumped, they should be packed in a 60 deg. common salt brine, which is made by dissolving 15 lbs. of salt in 85 lbs. of water; nothing else need be added. All animal heat must be thoroughly extracted, and the livers must be properly chilled and cooled.

DIRECTIONS FOR CURING LEAN SHOULDER BUTTS.

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LIGHT WEIGHT BUTTS.

Use for 100 lbs. Light Weight Butts.
- 8 lbs. of Common Salt,
- 1 lb. of **Freeze-Em-Pickle,**
- 2 lbs. Granulated Sugar,
- 5 gals. of Cold Water.

Cure in this brine 20 to 30 days.

HEAVY WEIGHT BUTTS.

Use for 100 lbs. Heavy Weight Butts.
- 9 lbs. of Common Salt,
- 1 lb. of **Freeze-Em-Pickle,**
- 2 lbs. of Granulated Sugar,
- 5 gals. of Cold Water.

Cure in this brine from 30 to 40 days according to size.

The sugar used must be Pure Granulated Cane Sugar and not sugar made from sugar beets.

First:—Sort the Butts, separating the Light Weight Butts and the Heavy Weight Butts.

Second:—Take enough of any one size of the assorted

Butts to fill a tierce which will be 285 lbs.; then thoroughly mix together in a large pail or box the following proportions of **Freeze-Em-Pickle,** the very best and purest Granulated Sugar and Salt.

Use for 285 lbs. of Light Weight Butts, 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Granulated Sugar and 24 lbs. of Salt.

For 285 lbs. of Heavy Weight Butts, 3 lbs. of **Freeze-Em-Pickle,** 6 lbs. of Granulated Cane Sugar, and 27 lbs. of Salt.

HOW TO CURE BUTTS IN OPEN TIERCES.

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When the tierces or barrels in which these Butts are cured, are not to be headed up, but are left open, use half of the **Freeze-Em-Pickle,** Sugar and Salt for rubbing as follows:

First:—Rub each Butt well with some of the mixture of **Freeze-Em-Pickle,** Sugar and Salt. Sprinkle a little of the mixture in the bottom of the tierce.

Second:—Pack the Butts in a perfectly clean tierce. The mixed **Freeze-Em-Pickle,** Sugar and Salt that is left after rubbing should be used for making the brine. It will require 14 to 15 gallons of brine for each tierce of Butts. Make the brine by dissolving in cold water all the mixed **Freeze-Em-Pickle,** Sugar and Salt that is left after the Butts are rubbed. Stir well for a minute until it is dissolved, and then pour this brine over the meat. When curing only a small quantity of Butts, cut down the proportions of **Freeze-Em-Pickle,** Sugar and Salt, also the quantity of water, according to the quantity of Butts to be cured.

QUANTITY OF BRINE TO USE FOR CURING 100 LBS. OF BUTTS.

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Five gallons by measure, or 42 lbs. by weight, is the approximate amount of water to use for every 100 lbs. of meat.

Tierces, after being packed with 285 lbs. of meat, will hold about 15 gallons of water. When curing Butts in vats or open barrels, whether in small or large quantities, always use not less than 5 gallons of brine to 100 lbs. of meat, as this makes the proper strength and a sufficient brine to cover the meat.

HOW TO OVERHAUL BUTTS WHEN CURING IN OPEN PACKAGES.

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On the fifth day after packing each lot of Butts, it is necessary that they should be overhauled. This must be repeated seven days later; again in ten days, and a final overhauling should be given ten days later. Overhauling Light Butts three times, and Heavy Butts four times while curing, and at the proper time in each instance, is very important, and must never be forgotten, especially when curing with this mild, sweet cure. Overhauling means, to take the Butts out of the brine and to repack them in the same brine. The proper way to overhaul is to take a perfectly clean tierce, set it next to the tierce of Butts to be overhauled, pack the meat into the empty tierce, and then put this same brine over the meat.

HOW TO CURE BUTTS IN CLOSED UP TIERCES.

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Large packers who employ coopers, should always cure Butts in closed up tierces, as this is the best method known.

First:—Mix the proper poportions of **Freeze-Em-Pickle,** Sugar and Salt, for the different size Butts to be cured. These proportions are given in the foregoing table, under the heading, "Light Weight Butts, and Heavy Weight Butts." If the tierces are to be headed up, use half of the **Freeze-Em-Pickle,** Sugar and Salt, for rubbing the Butts, and the half that is left over after the Butts are rubbed, should be dissolved in the water which is to be used to fill the tierce. Rub each Butt well before packing; put only 285 lbs. of meat in each tierce, and then head them up.

Second:—Lay the tierces on their sides and fill them through the bung hole, with water in which the half of **Freeze-Em-Pickle,** Sugar and Salt left over after rubbing, has been dissolved.

Third:—Insert the bung and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle,** Sugar and Salt rubbed on the meat. Where the pieces of meat press tightly against each other, or against the tierce, the brine does not act on the meat; but if the

pieces of meat are rubbed properly with the mixture of **Freeze-Em-Pickle.** Sugar and Salt before being packed in the tierce, such surfaces will be acted upon by the undissolved mixture, so that the curing will be uniform and no portion of the pieces will be left insufficiently cured, even if the brine does not come in contact with it. For this reason, it is important that each piece of meat should be carefully rubbed with the mixture before being packed in the tierce.

Fourth:—Overhaul five days after packing; again seven days later, again in ten days, and once more ten days thereafter. At each overhauling, examine each tierce for leaks; if any of the Pickle has leaked out, knock the bung in and refill. Remember to overhaul Light Butts three times, and Heavy Butts four times.

Fifth:—Overhaul Butts in closed-up tierces, simply by rolling the tierces from one end of the cooler to the other. They ought to be rolled at least 100 feet.

ROLLED BONELESS BUTTS OR BUTT SAUSAGE.

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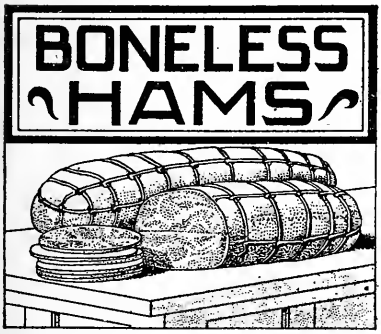

After the Butts are thoroughly cured, they should be stuffed in beef bungs; if they are large only one should be stuffed in each casing; if they are small, two can be stuffed together side by side. The casings should be tied off at each end, and then wound with a heavy string, which should be wrapped as tightly as possible. Perforate the casings with a fork so as to let out any air that may be in them; then smoke them over night in a cool smoke; in the morning boil them. If they are to be sold uncooked, dip them in boiling water for five minutes, and then in cold water so as to shrink the casings. Our new Improved Zanzibar Carbon can be used on the casings to give them a beautiful color.

HOW TO CURE MEAT FOR LUNCH HAM OR NEW ENGLAND PRESSED HAM.

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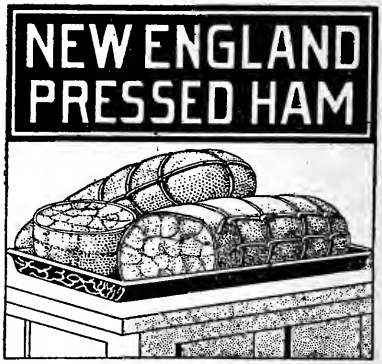
The **Freeze-Em-Pickle** Process is especially adapted for curing Ham trimmings which are used for Berliner Hams, Lunch Hams, Boneless Hams, New England Pressed Hams, etc. It will cure and preserve Ham trimmings perfectly, and will give them a rich, delicate sugar-cured ham flavor. It does not draw the albumen out of the meat, but the natural binding qualities are retained, and the meat has a rich, red, cured-meat color. Trimmings cured with the **Freeze-Em-Pickle** Process can be kept in cold storage for a year without getting too salty or becoming short and losing their nice flavor and binding qualities.



The following directions must be carefully followed to get the results desired:

First:—The trimmings should not be larger than and egg, and should be as uniform in size as possible.

Second:—Do not run the trimmings through an Enterprise Grinder to cut them up before packing them, as it has a tendency to heat the meat.

Third:—Trimmings that are to be held for any great length of time must be fresh as possible; if they should be somewhat slimy, they should be washed thoroughly in cold common salt brine and allowed to drain until quite dry. Never mix or salt trimmings that become slimy, with fresh ones; always pack them separately.

Fourth:—It is absolutely necessary that the meat should be thoroughly chilled, and that the packing should be done in the cooler so that the temperature of the meat will not get above the temperature in which it is to be cured.

Fifth:—For each 100 lbs. of trimmings, take 1 lb. of **Freeze-Em-Pickle,** 1 lb. of best Granulated Sugar and 2 lbs. of Common Salt, and mix these thoroughly

with the meat. Mixing thoroughly is very important; it should be carefully done so as to insure a uniform cure.

Sixth:—Have the tierces or barrels perfectly clean and sweet; then sprinkle a little salt on the bottom, and fill the barrel or tierce about one-quarter full of salted meat, and pound it down hard with a tamper. Do the same when the barrel is half full and continue in this manner until the barrel is filled. This tamping is done to expel all the air between the pieces of meat, and it is an important factor to insure a uniform cure and color. If the trimmings are to be kept any length of time, it will be necessary that the tierces or barrels should be headed up, and they should always be filled with meat as much as possible. When trimmings are to be used as soon as cured, it is not necessary to head them up, simply put a top on them and weight them down, or cover them with a clean cloth and put a layer of salt about one inch thick, over the top of the cloth. This will keep out the air and will give good results. The trimmings will be cured in from two to three weeks, and are then in a perfect condition to be made into New England Pressed Hams, etc. They need not be soaked in water, nor need any salt be added as they are ready for instant use just as they are and will have a most delicious sugar-cured ham flavor.

See paragraph on Temperature for Curing Meats on page 46.

HOW TO MAKE NEW ENGLAND PRESSED HAMS.

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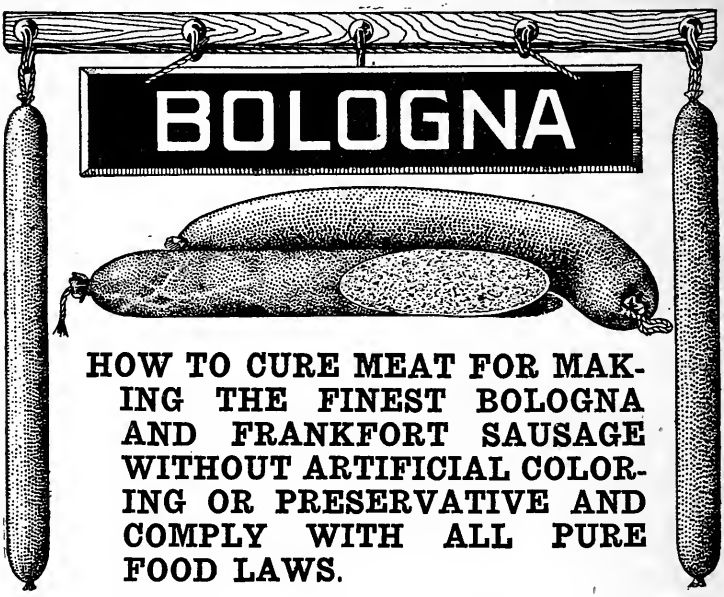
After the meat is cured, it should be stuffed in beef bungs and should be smoked about three hours, but this depends upon the smoke house and whether wood or sawdust is used. It may be necessary to smoke the Pressed Ham still longer. Boil them in a temperature of 180 degrees Fahrenheit for 1½ hours, then reduce the temperature to 170 degrees Fahrenheit and remove them at the expiration of one hour. Add to the boiling water a small quantity of our Improved Zanzibar Carbon to give the casing a beautiful smoke color. After they are boiled for 2½ hours, they should be laid out on a table in the cooler, and then boards should be placed on top of them weighted down with heavy stones, and should remain there over night before being removed.

B. HELLER & CO.



HOW TO CURE MEAT FOR MAKING THE FINEST BOLOGNA AND FRANKFORT SAUSAGE WITHOUT ARTIFICIAL COLORING OR PRESERVATIVE AND COMPLY WITH ALL PURE FOOD LAWS.

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In following the old method of making Bologna and Frankfort Sausage, a large percentage of the albumen is drawn out of the Meat, thus losing much of the richness and flavor and color which should be retained in the Sausage.

B. Heller & Co. have made an important discovery in the process of curing trimmings, and Sausage Makers will find it greatly to their advantage to make an immediate trial of this process. A single batch of Sausage made after this method will convince any Sausage Maker of the mistake of following the old ideas of making Bologna and Frankfort Sausages.

First:—To every 100 lbs. of Trimmings, add one pound of **Freeze-Em-Pickle.** Mix the **Freeze-Em-Pickle** thoroughly with the Meat. Use nothing else with the **Freeze-Em-Pickle**—not even salt.

One thing must always be remembered: That to cover the entire surface of all the pieces of meat in 100 lbs. with only one pound of **Freeze-Em-Pickle,** the **Freeze-Em-Pickle** must be finely powdered and it must be thoroughly mixed with the Meat, so it gets to all parts of the Meat.

Unless the **Freeze-Em-Pickle** gets to all parts of the Meat, those parts that are not covered will not keep.

Therefore, great caution must be used when the Meat is mixed with it.

To overcome any danger of Meat spoiling because of the **Freeze-Em-Pickle** not getting to all parts of it, we strongly recommend, when it can be done, to cut up the pieces of meat not larger than the size of an egg. Mix the **Freeze-Em-Pickle** as thoroughly as can be with the Meat and pack this Meat in tubs or barrels and place it in a cooler to cure. In this way the **Freeze-Em-Pickle** will get to all parts of the Meat and will draw through it, so the inside of the meat will be cured as well as the outside.

We have had some complaints from Butchers, that **Freeze-Em-Pickle** did not draw through the Meat; that the outside would be nicely cured but the inside was not properly cured. In every instance, upon investigation we found that the trouble was that the chunks of Meat were too large when it was packed with **Freeze-Em-Pickle.** Every Butcher will know that the **Freeze-Em-Pickle** will not draw through a chunk of meat as big as the fist in two or three days—this would be impossible. The smaller the pieces of Meat, the better it will be cured through.

Second:—After mixing the **Freeze-Em-Pickle** thoroughly with the Trimmings, pack the Trimmings in tierces or barrels as tightly as possible and place in the cooler for three or four days, allowing the Meat to cure for this length of time. After the Meat has been in the cooler for three or four days, it will be nicely cured and will have a beautiful cured meat color. The juices of the Meat will be coagulated like jelly, and no juice or water will be found in the bottom of the barrel, as in the old way of salting bologna Meat. If it is necessary to keep the Meat a week or even two weeks, it can be kept that long in the cooler without any additional salt or anything else being added except the one pound of **Freeze-Em-Pickle** to 100 lbs. of Meat.

Third:—When ready to make the Bologna or Frankforts, chop or grind these cured Trimmings, and while chopping or grinding add the necessary salt to flavor same, about two or three pounds to the 100 pounds of meat, according to the taste as desired. Remem-

ber, the salt should not be added to the Meat when it is packed with the **Freeze-Em-Pickle,** but the salt must be added to the Meat **after it has been cured with Freeze-Em-Pickle** and when the Meat is made into Bologna or Frankforts. While the Meat is being ground and chopped, also add the spice and Bull-Meat-Brand Flour. Bull-Meat-Brand Flour complies with the National Pure Food Law and is added to the Sausage as a binder and to absorb the juices of the Meat so that when the sausage is cooked these will not be drawn out. Sausage made with Bull-Meat-Brand Flour is much more nutritious and has a better flavor than when made without it.

When Bologna and Frankforts are made from fresh Meats, they have a gray color and are very difficult to keep in good condition, especially during the warm weather. However, when Bologna and Frankforts are made by the **Freeze-Em-Pickle** Process, they will have a beautiful red color and they will comply with all Pure Food Laws, because **Freeze-Em-Pickle** contains no ingredients which have been prohibited by any of the food laws. They will also keep much better than when made in any other way, and will stand shipment during the warm weather.

Some State Pure Food Laws now prohibit the use of any artificial coloring whatever in Meats and Meat-Food products. Consequently, in such States, Bologna and Frankforts must not contain any of the colors that heretofore have been so largely used to give them the desired inside red appearance. However, if the following instructions for preparing the Meats for making Bologna and Frankfort Sausage are followed, the Meats will have the natural cured meat color which heretofore was obtained artificially, and no artificial coloring will be necessary. The Sausage made from such Meats will not only comply with the requirements of the food laws, but will be nice in appearance and flavor.

DIRECTIONS FOR SALTING BEEF AND PORK TRIMMINGS.

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First:—Trim out the Trimmings and cut them into small pieces to average about the size of an egg, or even smaller is better; and then spread the meat on the floor or in pans on racks in the cooler for 24 hours, so that it will become thoroughly chilled.

Second:—If Bologna Trimmings are to be used any time within a few days or even within two or three weeks, they should be simply salted with 1 lb. of **Freeze-Em-Pickle** to 100 lbs. of Trimmings and no salt should be added. The **Freeze-Em-Pickle,** alone is sufficient to keep the Trimmings, and the Trimmings are much better than if salt is added if the Trimmings are to be used within this length of time. If the Trimmings are to be kept longer than two weeks, handle as follows:

For every 100 lbs. of Trimmings use { 1 to 3 lbs. Common Salt. 1 lb. of **Freeze-Em-Pickle.**

If the Trimmings are to be kept 2 weeks to 2 months, use 1 lb. Salt.

If the Trimmings are to be kept 2 to 3 months, use 2 lbs. Salt.

If the Trimmings are to be kept 3 months to a year, use 3 lbs. Salt.

Third:—Mix the **Freeze-Em-Pickle,** Salt and Trimmings together thoroughly, so that some of the Salt and **Freeze-Em-Pickle** will be sure to get to all parts of the Meat.

Fourth:—Take perfectly clean tierces, and sprinkle a handful of Salt on the bottom of each tierce and pack the Trimmings in them as tightly as possible; the Meat should be tamped with a tamper when the tierce is one-quarter full; again when it is one-half full; again when it is three-quarters full, and again when it is full. It must be packed as tightly as possible to prevent the air from getting between the Meat. Put a handful of salt over the top of the Meat and if the Meat is to be kept for six months or a year, it is advisable to put the heads into the barrels, but if it is to be kept for only a few months, simply put a clean cloth over the top of the meat and then put over it a layer, about one inch thick of dry salt. This will exclude the air and keep the top Meat from getting dry and dark. The Trimmings when handled in this way, and stored for some time, will make better Bologna and Frankforts than fresh Meat, while at the same time. the Bologna or Frankforts will keep much longer and give much better satisfaction than if fresh Trimmings were used.

There are seasons of the year when Beef Trimmings and Bull Meat can be bought at a very low price. This meat can be very easily packed with **Freeze-Em-**

Pickle, and stored in a cooler to be kept until the meat is high; it can then be worked into Bologna and Frankforts with the best results.

The Large Packers make their greatest profit by filling their packing houses when Meat is cheap, and keeping it until the prices are high enough to justify them in selling it at a good profit. The small Sausage Maker should adopt the same means for making money; he should buy his Beef Trimmings when they are cheap, keep them until they are high, then work them into Bologna and Frankfort Sausage. There are certain seasons of the year when Bulls can be bought at a very low price. They can be trimmed out, and the Meat packed with **Freeze-Em-Pickle.** Bull Meat preserved with **Freeze-Em-Pickle** and salted for a month or so, will make much finer bologna than fresh bull meat.

FREEZING SAUSAGE MEATS.

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The freezing of Meat for Sausage has a most detrimental effect upon its flavor, in fact, freezing Meats of all kinds always tend to some extent to spoil the flavor of the Meat; therefore the greatest care should be exercised in protecting Meats against such damaging results. When the albumen of the Meat is frozen and is afterwards thawed out, the albumen leaves the cells of the Meat and in that way the flavor is lost and the Meat becomes insipid. Refrigeration is a good thing, but freezing is certainly very harmful to Meats for Sausage.

FORMULA FOR BOLOGNA SAUSAGE.

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The following formula makes very fine Bologna Sausage:

60 lbs. Beef Trimmings cured by **Freeze-Em-Pickle** Process.

10 lbs. Pork Trimmings cured by **Freeze-Em-Pickle** Process.

5 lbs. Pork Speck (Back fat).

5 lbs. Bull-Meat-Brand Flour.

2 to 3 lbs. Salt.

6 to 8 ounces Zanzibar-Brand Bologna Sausage Seasoning.

Sufficient Cold Water to give the proper consistency for stuffing. (Ice Water is always the best to use.)

First:—Salt the Pork and Beef Trimmings according to the directions on page 118.

Second:—When making Bologna, chop the Pork and Beef first, and when about half chopped add the Speck (or fat). After adding the Fat, add sufficient salt, from 2 to 3 lbs., so as to give it the proper flavor, and also add the spice, 6 to 8 ounces of Zanzibar-Brand Bologna Seasoning.

Third:—Take half the quantity of water which is to be added to the bologna and mix it with 5 lbs. of Bull-Meat-Brand Flour and work it into the Meat.

Note:—Since the Pure Food Laws have been enacted, all Antiseptic Preservatives have been ruled out and cannot be used in sausage, so sausage makers must be careful what kind of a Sausage Binder they use in their sausage. Many of the binders on the market start fermentation the minute moisture is added to them. When it is noticed that the Bologna does not keep as well as it should, the first thing to be looked to is the binder used, as invariably a binder which is not free from the germs of fermentation will cause trouble, and the losses a butcher has from using such binders will amount to more than the saving in the cost of the binder. Many cheap binders can be bought for less money than Bull-Meat-Brand Flour, as they cost less to manufacture. We are not trying to see how cheap a binder we can manufacture, but our sole aim in manufacturing Bull-Meat-Brand Flour is to make the very Finest Binder that we can make, which will preserve the sausage instead of souring it, and, even if our price is a trifle higher, Bull-Meat-Brand Flour is much cheaper to use and the results are always satisfactory.

Fourth:—Take the balance of the water and work it into the Meat gradually. The water should be added a little at a time and should be thoroughly worked in each time. If the water is added in small quantities at a time, the Meat binds much better than if it is all added at once.

Fifth:—If a Garlic flavor is desired, add one or two tablespoonfuls of Vacuum Brand Garlic Compound while it is being chopped. Vacuum Brand Garlic Compound is the best garlic to use, as it does not sour in the sausage and it does not give any after-taste and gives no odor to the breath, because it is so finely divided that it is thoroughly incorporated in the meats and is thoroughly digested and absorbed.

Sixth:—After the Meat is chopped to the proper fineness, stuff it into beef rounds or beef middles. Place the sausage in the smoke house and smoke.

BOILING BOLOGNA.

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After it is smoked, boil Round Bologna 30 minutes in water 160 degrees Fahrenheit and Long Bologna for 45 to 60 minutes in 160 degrees water, according to thickness. Improved Zanzibar Carbon may be used in the boiling water to give the casing a fine smoke color.

After they are boiled place them on a table, or hang them up and pour boiling water over them to wash off the grease. Then pour cold water over them to shrink the casings. After that allow them to cool in the open air or a well ventilated room, before placing in the cooler or ice box. **This will prevent sweating, which causes mouldy and slimy casings.**

BOILING LARGE BOLOGNA.

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If Large Bologna are desired, stuff the meat into beef bungs and smoke until they are nicely smoked, then boil them from 1¼ to 1½ hours in water 155 degrees Fahrenheit. Vary the time of boiling according to the thickness of the Bologna.

SALTING FAT FOR BOLOGNA.

The Pork Back Fat or Pork Speck will be much better for use in Bologna and Frankforts if it is dry salted for a few weeks before it is used.

HOW TO COLOR THE CASINGS OF SMOKED SAUSAGE WITH OUR IMPROVED ZANZIBAR CARBON.

COLORING BOLOGNA CASINGS.

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Hang the bologna in the smoke house just long enough to dry the skin well, or hang it in front of a hot fire, or in the sun, any way to get the slime all dried out of the casing; then in every 30 gallons of water used for boiling the bologna, use ½ to 1 teaspoonful of Improved Zanzibar Carbon; boil the Bologna in it just the same as if no coloring were used. Sausage makers who wish to use the Improved Zanzibar Carbon the best and most economical way should observe the following rules:

Heat the water to the proper temperature in which the Bologna is to be cooked, then take a small quantity of the hot water in a pail or dipper, dissolve the Improved Zanzibar Carbon in it as per above given quantities, put this dissolved Improved Zanzibar Carbon into the hot water and cook the bologna in it. The water should not be boiling, only very hot; let the sausage cook slowly. Boiling the bologna too fast shrinks it too much and very often bursts the casing. When increasing or decreasing the amount of water, regulate the amount of Improved Zanzibar Carbon accordingly. Sausages colored properly should, when taken out of the cooking vat or kettle, not appear as if colored at all, but should have a half-smoked appearance, and as soon as cooled off will change to a bright, fresh smoke color. Never use

enough Improved Zanzibar Carbon in the water to color the casing to that extent that the sausage looks colored when taken out of the water, use only about half that quantity. It should look as if only half colored when taken out of the cooking water, and after it hangs about 30 minutes it will change and have a bright appearing fresh smoke color.

After taking the bologna out of the cooking vat, pour hot water over it; this washes off the slime and grease which floats on the top of the water and adheres to the bologna. After it is washed off thoroughly with hot water, pour cold water over it, or dip the bologna in cold water. This shrinks the casing and draws it tight, so the bologna never gets wrinkled; it closes all the pores of the casings, which helps to keep the bologna from shrinking. Washing and shrinking the casings are very necessary and should never be neglected. Always use hot water first and then cold water. Never put the bologna in cold water before first washing them off with boiling water.

Important.—Bear in mind that Improved Zanzibar Carbon and grease do not mix, but are mortal enemies, and that the freer the casing is from grease the better are the results. Smoking of sausage at too high a temperature, causes the grease to try out, invariably giving poor results.

COLORING THE CASINGS OF BOLOGNA SO THE STRINGS ARE NOT COLORED.

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Soak the casings for a few minutes in a warm solution consisting of 1 tablespoonful of Improved Zanzibar Carbon dissolved in ½ barrel of water, varying the quantity of Improved Zanzibar Carbon according to the color desired. After the casings become nearly an orange color take them out of the Improved Zanzibar Carbon solution and wash them well in hot water, cut and tie them. After the casings have been colored as above, they should be stuffed and half smoked, then cooked just the same as if the sausage was well smoked and use no coloring in the cooking water. The strings will not be colored and the sausage will look the same as sausage made without color.

FRANKFORT SAUSAGE; HOW TO MAKE.

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Frankfort Sausage is made in most cases in exactly the same manner as Bologna with the exception that it is chopped very fine and Zanzibar Brand Frankfort Sausage Seasoning is used. To make extra fine Frankfort Sausage use two parts of Beef and one part Pork.

If Veal is used in Frankfort Sausage, it improves it considerably, but the price of Veal is so high that it is very seldom used. Stuff in sheep casings and smoke lightly, then dip them in hot water for five minutes in which ¾ to 1½ teaspoonfuls of our Improved Zanzibar Carbon to 40 gallons of water has been added.

Dipping them in hot water swells them and takes out all the wrinkles. After they have been dipped, pour a pail of hot water over them to wash off all adhering grease; then dip them for a minute or two in ice water to cool. This will make them contract so rapidly that they cannot wrinkle or shrink; then put in a cooler to hang up and cool.

COLORING FRANKFORT SAUSAGE CASINGS.

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For Frankfort sausage use double the quantity of Improved Zanzibar Carbon which you would use for bologna, ¾ to 1½ teaspoonfuls, and only leave them in this water at 170 deg. Fahrenheit five minutes, but don't boil them, and always wash them in boiling hot

water by pouring it over them after they are taken out of the coloring water.

If a deep color is desired, slightly increase the amount of Improved Zanzibar Carbon. You must use your own judgment in producing the right color desired, as the drier the casing the less Improved Zanzibar Carbon it takes and the better the color will be.

Always be particular not to smoke with too much heat in the smoke house, so that the grease does not melt in the sausage and come through the casing.

TO COLOR FRANKFORT SAUSAGE CASINGS BEFORE STUFFING.

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Soak the casings for a few minutes in a warm solution consisting of one tablespoonful of Improved Zanzibar Carbon dissolved in one-half barrel of water, varying the quantity of Improved Zanzibar Carbon according to the color desired. After the casings become nearly an orange color take them out of the Improved Zanzibar Carbon solution and wash them well in hot water. After the casings have been colored as above, they should be stuffed and half smoked, then cook just the same as if the sausage was well smoked but use no coloring in the cooking water.

CURING BEEF CHEEKS FOR BOLOGNA AND FRANKFORTS.

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First:—The Cheek Meat should be cut out of the heads as soon as possible after the beef is killed, and the gristle should be cut through lengthwise, two or three times. All the fat can also be trimmed off or left on, just as desired; in a large slaughtering establishment, the fat is worth more in the tank than in the Sausage.

Second:—The Cheeks should then be thrown into ice water and allowed to remain there for an hour or two. This will draw out all the slime and blood.

Third:—The Cheeks should then be spread out thinly on coarse wire screens, or on perforated galvanized iron pans, in a cooler. They should be spread out as thinly as possible so as to thoroughly drain and chill.

Fourth:—After they are thoroughly chilled, which will take 24 hours, they should be salted as follows:

DIRECTIONS FOR DRY SALTING BEEF CHEEKS.

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Use for 100 lbs. Beef Cheek Meat. { 1 lb. of **Freeze-Em-Pickle.** ½ to 3 lbs. of Common Salt.

First:—Mix the proper quantities of **Freeze-Em-Pickle** and Salt together in a pail or box, for 100 lbs. of Cheek Meat, and then thoroughly mix this mixture with the meat.

For Beef Cheek Meat to be kept less than two weeks:

Use for 100 lbs. Beef Cheek Meat. { 1 lb. of **Freeze-Em-Pickle.** ½ lb. of Common Salt.

For Beef Cheek Meat to be kept from two weeks to two months:

Use for 100 lbs. Beef Cheek Meat. { 1 lb. of **Freeze-Em-Pickle.** 1 lb. of Common Salt.

For Beef Cheek Meat to be kept from two to six months:

Use for 100 lbs. Beef Cheek Meat. { 1 lb. of **Freeze-Em-Pickle.** 2 lbs. of Common Salt.

For Beef Cheek Meat to be kept from six months to one year:

Use for 100 lbs. Beef Cheek Meat. { 1 lb. of **Freeze-Em-Pickle.** 3 lbs. of Common Salt.

Second:—Take a perfectly clean tierce, sprinkle a handful of salt on the bottom; put the salted cheek meat into the tierce and tamp it down with a tamper as hard as possible.

Third:—Continue mixing the same proportions of **Freeze-Em-Pickle** and Salt to every 100 lbs. of meat to be salted; then keep on packing 100 lbs. into the tierce at one time, tamping down each 100 lbs. until the tierce is entirely filled. The object in tamping it with a tamper is to get all the air out and to close up all the loose cavities in the tierce. The less air space in the tierce, the better the Cheek Meat will cure and keep.

Fourth:—If the tierces are to be headed up, sprinkle a handful of salt on the tops of the tierces and put in the heads, being careful that the tierces are as full as possible before the heads are put in.

Fifth:—If the tierces are to remain open, they can be covered with a clean cloth and a layer about two or three inches thick of dry salt should be put over the top of the cloth. This will exclude the air and keep the top meat from getting dry and dark.

Sixth:—Cheek Meat that has been properly chilled and packed in this manner can be kept for any length of time and need not be overhauled. It can be kept for a year or longer and whenever it is taken out of the barrel and used, it will make fine Bologna and Frankforts with a beautiful color and a delicious flavor. Dry salted Cheek Meat makes much better Bologna than the pickled Cheek Meat. Sometimes Cheeks are very low in price, and they can be packed and stored as above directed and kept until the market advances; by this method quite a sum of money can be made each year.

Seventh:—See paragraph on Temperature for Curing Meats on page 46.

CURING BEEF AND PORK HEARTS FOR BOLOGNA AND OTHER SAUSAGE.

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First:—As soon as the beef or hog is slaughtered, the hearts should be cut open; the pork hearts should be cut into four squares, and the beef hearts into six or eight pieces, being sure to cut them so that all the crevices are open and exposed. They should then be placed in ice water in which they should be allowed to remain for two to three hours.

Second:—Spread the hearts on the floor, or in trays on racks in a cooler as thinly as possible, and allow them to chill for 24 hours; they must be thoroughly chilled so that all animal heat leaves them.

Use for 100 lbs. of	1 lb. of **Freeze-Em-Pickle.**
Beef or Pork Hearts.	3 lbs. of Common Salt.

Third:—Mix the proper quantity of **Freeze-Em-Pickle** and Salt together in a pail or box, for 100 lbs. of hearts, and then thoroughly mix this mixture with the cooled hearts.

Fourth:—Take a perfectly clean tierce, and sprinkle a handful of salt on the bottom; put the salted hearts into the tierce and tamp them down with a tamper as hard as possible.

Fifth:—Continue mixing the same proportions of **Freeze-Em-Pickle** and Salt to every 100 lbs. of hearts; then pack them into the tierce, tamping down each 100 lbs., until the tierce is entirely filled. The object in tamping with a tamper is to get all the air out and to close up all the cavities in the barrel. The less air cells in the barrel, the better the hearts will cure and keep.

Sixth:—If the tierces are to be headed up, sprinkle a handful of salt on top of the tierces and put in the heads, being careful that the tierces are as full as they possibly can be before the heads are put in, and also that the tierces are perfectly sweet before packing.

Seventh:—If the tierces are to remain open, they can be covered with a cloth and about two or three handfuls of dry salt should be put over the top of the cloth. This will exclude the air, and will keep the top meat from getting dry and dark.

Eighth:—Hearts that have been properly chilled and packed in this manner can be kept for any length of time and need not be overhauled. They can be kept for a year or longer, and whenever taken out of the tierces to use, they will make fine bologna and such sausage as hearts can be used for. Quite a quantity of properly cured hearts can be used in the manufacture of sausage with very good results. They will have a beautiful color and a delicious flavor. Hearts should never be pickled for bologna, but should always be dry salted as above directed. It is very often the case that hearts can be bought at a small cost when the market is low, and if so purchased and packed and stored as herein directed until the market advances and meat is high, they can be made into bologna with a very handsome profit.

Ninth:—See paragraph on Temperature for Curing Meats on page 46.

GERMAN HAM SAUSAGE.

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German Ham Sausage is made very much like Bologna, except that the meat should be chopped finer. For every 100 lbs. of Ham Sausage, take the following:

50 lbs. of Pork Trimmings.

40 lbs. of Beef Trimmings.

5 lbs. of Pork Speck (Back Fat).

5 lbs. of Bull-Meat-Brand Flour.

2½ lbs. of Salt.

6 to 8 ounces Zanzibar Brand Frankfort Sausage Seasoning.

First:—Salt the Pork and Beef Trimmings four or five days ahead, using to each 100 lbs. of meat 1 lb. of **Freeze-Em-Pickle**, as directed on page 118. No salt or anything in addition to the **Freeze-Em-Pickle** should be added when the meat is put down to cure. The salt is added when the Sausage is made.

Second:—When making Ham Sausage, use the Pork and Beef in the proportions as stated above, and when about half chopped add the Speck or Back Fat.

Third:—After adding the Fat, add sufficient salt so as to have 2½ to 3 lbs. to each 100 lbs. of finished Ham Sausage. Also add 1 lb. of Prepared Bologna Seasoning and a tablespoonful of Ground Mace.

Fourth:—Take half of the proper quantity of water which is to be added to the Ham Sausage and mix into it 5 lbs. of Bull-Meat-Brand Flour, and work it into the meat in small quantities at a time.

Fifth:—Then add the remaining water to the meat in small quantities, little by little, until all of the necessary water has been added. If the water has been added in small quantities at a time, the meat and Bull-Meat-Brand Flour will absorb all of it nicely; but, on the other hand, should all, or even one-half of the water be added at once, the meat will not absorb

it as it otherwise would. Water should always be added to Sausage Meat a little at a time.

Sixth:—When the meat is chopped, stuff it into Beef Bung Casings. After the Sausage is stuffed, it is well to wrap string around it tight, so the Sausage will be firm when cooked and will not drop in the smoke house.

Seventh:—Smoke this Sausage carefully over a medium warm fire.

Eighth:—Cook the Sausage from 1¼ to 1½ hours, in water 155 degrees hot. Vary the time according to the thickness of the Sausage and add a small quantity of our Improved Zanzibar Carbon to the water. See directions on page 123 for coloring Bologna and color this Sausage the same way.

Ninth:—After Sausage of any kind has been cooked, it should be handled as follows: Pour boiling water over it to wash off the surplus grease that adheres to the casings and then pour cold water over it to shrink and close the pores of the casings. This is very important and it should be closely observed by all packers and sausage makers who wish to have their Sausage look nice and fresh in appearance.

HOW TO PREPARE CASINGS BEFORE STUFFING.

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Before casings are stuffed, they should always be soaked in warm water, so as to make them pliable, so they will stretch to their utmost limit when being stuffed. If they are properly soaked, they will stretch considerably and will not burst as easy as they will if they are not properly soaked. The casings should be soaked in water about 90 degrees temperature Fahrenheit, from one to two hours, depending upon how old and dry they are. If the casings are very old and dry, they will have to be soaked until they are perfectly soft and pliable. When casings are soaked in water that is too hot, the casings are scalded and become tender and will burst when being stuffed, and the heavy Sausage will tear loose in the smoke house.

HOW TO PREVENT BURSTING AND SHRINKING OF SAUSAGE.

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Many undergo a great deal of trouble from the bursting and shrinking of Sausage and it is a trouble which can be easily avoided, as it is entirely owing to the manner of boiling the Sausage. Ordinary round or long Bologna should be kept in water at 160 to 170 degrees Fahrenheit for about 30 minutes, and thick large Bologna should be kept in water from 155 to 160 degrees Fahrenheit from three-quarters of an hour to one hour, according to the size. If the Sausage is very large, it will take from one and one-quarter to one and one-half hours to cook them thoroughly. When Sausage is boiled in water that is too hot the particles of meat will crumble and separate. The Sausage will taste dry, although water will be in the crevices between the small pieces of meat. The Sausage will look rough on the outside and will also lose more weight than when boiled as above directed. Many of them will burst when the water is too hot. After Sausage of any kind has been cooked, it should be handled as follows: Pour boiling water over it to wash off all the surplus grease that adheres to the casing and then pour cold water over it to shrink and close the pores of the casing. This is very important and should be closely observed by all packers and sausage makers who wish to have their Sausage look nice and keep its fresh appearance.

HOW TO SEASON HAMBURGER SO AS TO MAKE IT MORE PALATABLE AND PLEASING.

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A new and very successful way of increasing trade on Hamburger is to season it with one ounce of Zanzibar Brand Hamburger Seasoning to every 25 lbs. of meat. This gives the meat a Delicious Flavor, makes it more Palatable and Pleasing to the Taste and much more Appetizing and Satisfactory to the Customer. Sometimes Hamburger when made without Seasoning has a peculiar flavor and meat odor which many customers object to.

All this trouble is overcome by Seasoning all Hamburger with our Zanzibar Brand Hamburger Seasoning, as it gives the meat a Delicious Flavor and Aroma.

This is something that will increase the sale on Hamburger wherever it is used.

B. HELLER & CO.

HAMBURGER SAUSAGE

Below we give the recipe for a New Sausage that is well liked wherever it is being tried, and we advise every butcher to make use of it. This Sausage is a success, takes well with the trade when made up right and is very easy to make. It is a nice eating Sausage and customers are always pleased to get hold of something new for a change. Making Hamburger Sausage gives the butcher an opportunity for selling all the small pieces of beef and a large percentage of beef fat at a good profit, which is very often not easily sold otherwise.

DIRECTIONS FOR MAKING HAMBURGER SAUSAGE.

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Take—

70 lbs. Beef Trimmings.
20 lbs. Beef Fat.
10 lbs. Bull-Meat-Brand Flour.
20 lbs. Water.
6 to 8 ozs. Zanzibar Brand Hamburger Seasoning.
1 lb. **Freeze-Em-Pickle.**
2 or 3 large size Onions.
2 lbs. Salt.

First:—Take the 70 lbs. of Beef Trimmings and trim out all the sinew and cut them into small pieces.

Second:—Spread the meat on a table and sprinkle over it 1 lb. of **Freeze-Em-Pickle** to 70 lbs. meat. Mix it thoroughly so that the **Freeze-Em-Pickle** gets to all parts of the meat and then run the meat through a sausage grinder, through a medium fine plate, so as to

cut the meat into small pieces, so that the **Freeze-Em-Pickle** is thoroughly mixed with the meat. Then place it in the cooler in tubs or boxes not deeper than six inches and allow it to remain there from one to two days to cure. It is better to allow the meat to cure for two days or longer.

Third:—After the Beef is cured take 20 lbs. of Suet or Beef Fat, from the Brisket is the best, cut it up with 2 or 3 large Onions and run the Beef Fat and Onions through the meat grinder and grind it very fine, then mix the ground Beef Fat with the 70 lbs. of Cured Beef.

Fourth:—Put 10 lbs. of Bull-Meat-Brand Flour, 6 to 8 ounces of Zanzibar Brand Hamburger Seasoning and 2 lbs. of Salt in a pail and add 20 lbs. of cold water. After mixing add this to the ground Beef and Suet.

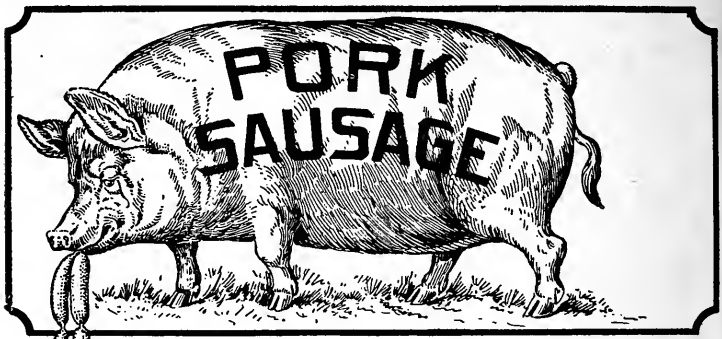
Fifth:—Mix the Beef, Suet, Bull-Meat-Brand Flour, Seasoning, Salt and water together as well as possible and then run it through the meat grinder again.

Notice:—Hamburger Sausage can also be made without curing the meat in advance if one prefers.

Simply mix the Beef, Fat, Bull-Meat-Brand Flour, Hamburger Seasoning, Finely Cut-Up Onions, **Freeze-Em-Pickle** and Salt all together, run it through a Grinder and add the water while grinding and mixing, and when ground it is ready for sale. This sausage will, however, have a different flavor than when made of cured meat as above.

Sixth:—After the Sausage is ground, spread it out on a platter, decorate it nicely with parsley, a few pieces of sliced lemon or orange, which adds to its attractiveness.

With each can of Hamburger Seasoning we furnish some of these cards free. Take a beef skewer, split the end of it so the card can be put into the slit and then stick this skewer into the platter of Hamburger Sausage. This little card will help the sale and you will be surprised at the many compliments you will receive on this new Sausage. We will gladly furnish as many as are desired of these cards free of charge to any butcher who is using our Hamburger Seasoning.



DIRECTIONS FOR MAKING PORK SAUSAGE BY THE FREEZE-EM-PICKLE PROCESS.

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The Pork should be prepared the day before it is to be used. The meat should first be cut into pieces about the size of a walnut and these should be sprinkled with dry **Freeze-Em-Pickle** in the proportion of 1 lb. of **Freeze-Em-Pickle** to 100 lbs. of meat. This is best done by spreading the meat on a table and sprinkling with the dry **Freeze-Em-Pickle** and then thoroughly mixing the pieces with the hands or a paddle, so the dry **Freeze-Em-Pickle** will come in contact with every surface of the meat. The meat should then be packed as tightly as possible into buckets or tubs and placed in the cooler, to remain there until used. It should remain in the cooler as long as 12 hours, and is better if left there for 24 hours, after which it is made into Pork Sausage in the following manner:

Take 100 lbs. of Pork Trimmings, prepared by the **Freeze-Em-Pickle** Process, as above described, and while chopping add:

5 lbs. of Bull-Meat-Brand Flour.

2 lbs. of Salt.

6 to 8 ozs. of Zanzibar Brand Pork Sausage Seasoning.

Then add, little by little, the necessary quantity of cold water to make the meat juicy. This will make a most delicious Pork Sausage.

Notice:—Pork Sausage can also be made without first salting the meat with **Freeze-Em-Pickle** as above

described, however sausage to be shipped or to be kept for some time will keep better when the meat is first cured with **Freeze-Em-Pickle** before being made into Sausage.

There are many kinds of Flours and Binders on the market, but the Sausage Maker will find Bull-Meat-Brand Flour to be the very best he can use, especially for Pork Sausage, as it does not sour or ferment and it makes an emulsion of the fat and water, and when the Sausage is fried the grease and meat juices will not fry out of it, but will remain in the Sausage. Pork Sausage made with Bull-Meat-Brand Flour is much more easily digested than when made without it, because the fat goes into the stomach in the form of an emulsion when the Sausage is eaten, and in this way is easily digested and absorbed. In using a Binder for Sausage, if it is the Butcher's desire to turn out a Fine-Flavored Sausage and one that is juicy when eaten, it is very important that he be very careful what kind of a Binder he uses. There are many Binders on the market, sold simply for the purpose of making money, which are **utterly worthless.** They make the Sausage dry and instead of improving the quality of the Sausage, they are a great detriment to it. If the Butcher takes a pride in his goods and wants to make Sausage that his trade will like, he should not buy these Binders, as he is simply throwing his money away and spoiling his goods by using them. Therefore, it is always advisable when buying from jobbers to insist upon getting the **Genuine B. Heller & Co.'s Bull-Meat-Brand Flour,** as you will then know exactly what you are getting, as our guaranty is on every package.

SMOKED PORK SAUSAGE.

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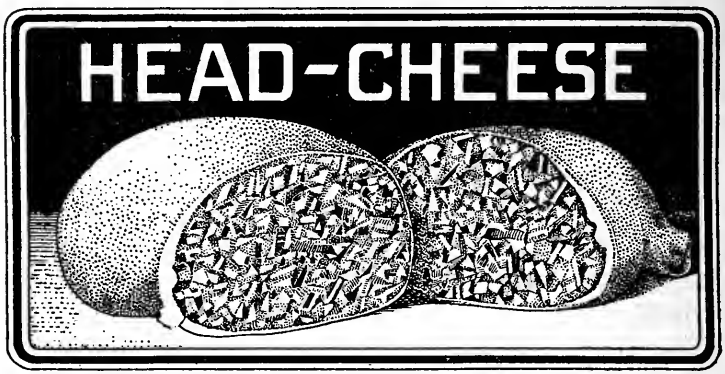
Pork Sausage not sold the day it is made may be smoked the following day and sold for Smoked Pork Sausage. Pork Sausage smoked the day after it is made will keep much better than when they are smoked as soon as made, because Sausage that have been kept in a cooler for 24 hours after being made are thoroughly cured, so they will stand the heat of the smoke house, and will have an entirely different flavor than if they are subjected to the heat when the meat is fresh and is not fully cured.

B. HELLER & CO.



HOW TO CURE MEAT FOR HEAD CHEESE.

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The proper way to make Head Cheese is to make it from Cured Meat only, and all the Heads and Meat used for it should be cured for 10 to 14 days in a brine made as follows:

1 lb. **Freeze-Em-Pickle.**
8½ lbs. of Salt.
5 gals. Water.

Head Cheese made from Meat cured by this process will have a beautiful red color and will keep well in warm weather. Always add Bull-Meat-Brand Flour to Head Cheese, as it makes it firm and combines with the fats and juices of the meat, so as to keep the Head Cheese from drying out and thereby losing its flavor.

DIRECTIONS FOR MAKING HEAD CHEESE.

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The proper meat to use for making Head Cheese is that which has been cured by the **Freeze-Em-Pickle Process,** as above described, but it can also be made from fresh meat if desired. It will, however, be much better and will keep for a longer time if made from meat cured by the **Freeze-Em-Pickle Process.**

First:—Boil the Heads slowly, and long enough so that the meat can be easily stripped from the bone.

Second:—Boil the Hog Rinds and the Hog Fat in nets at the same time as when boiling the heads. When the Rinds are almost cooked through, remove them from the kettle and chop or grind them fine. The Fat when cooked, should be cut up into 1¼ to 1½ inch square blocks.

Third:—Also boil about 15 lbs. of Cured Hog Tongues, and when they are cooked, cut them in strips.

Fourth:—The proper proportions for making good Head Cheese are as follows, but, the quantity of the different kinds of meat can be varied according to the stock on hand:

10 lbs. of Fresh Hog Back Fat.
15 lbs. of Cured Hog Tongues.
25 lbs. of Hog Rinds.
60 lbs. of Cured Hog Head Meat (after removal from bone).
5 lbs. of Bull-Meat-Brand Flour.
6 to 8 ozs. Zanzibar Brand Head Cheese Seasoning.
1 lb. of White Berliner Brand Konservirung Salt.

If any salt is needed add sufficient to suit the taste. If the meat is fully cured, no salt need be added.

Fifth:—The 60 lbs. of Head Meat must be cut into small pieces ½ to ¾ inch in size, either by hand or by machine.

Sixth:—The Rinds must be cut fine; the finer the better.

Seventh:—The Tongues must be cut into strips. The more Tongues used, the better will be the Head Cheese.

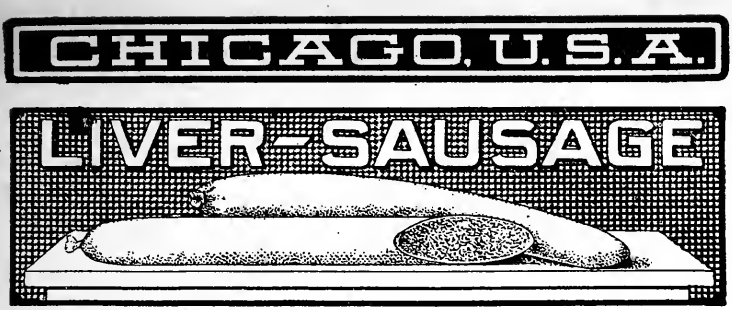
Eighth:—Mix thoroughly together the Tongues, Rinds, Head Meat, **Bull-Meat-Brand Flour,** the Prepared Head Cheese Seasoning and White Berliner Brand Konservirung Salt. At the same time, mix into the Meat as much of the Water in which the meat was boiled as the Meat will absorb while being mixed. This water, in which the Heads have been cooked, con-

tains Gelatine which has been drawn out of the meat while boiling, and this water congeals like Jelly when it becomes cold. The more of this water put into Head Cheese the better it will be, therefore add all of it that the meat will absorb. Bull-Meat-Brand Flour, in the proportion given in the above formula, will make a very different Head Cheese from what can be made with some of the other Binders on the market. It will pay sausage makers to use B. Heller & Co.'s Genuine Bull-Meat-Brand Flour instead of any of the imitations now on the market. None of the other Binders that we have tested in our laboratory will do what Bull-Meat-Brand Flour will do. If the Butcher uses the best of ingredients and follows the proper methods, he is bound to make the Best Sausage; but the most careful sausage maker cannot make Fine Sausage unless he uses **good material** for making his products.

Ninth:—After the Head Cheese Meat, Bull-Meat-Brand Flour and water in which the Heads have been boiled are mixed as above directed, stuff in Beef Bungs or Hog Stomachs and boil in water 155 degrees hot until they are cooked through. This will require from one to one and one-half hours, depending upon the thickness.

Tenth:—When cooked, remove from the kettle and place in cold water until they are partly cooled; then lay them on boards and press them down by putting boards over the Head Cheese with weights on them. Head Cheese is sometimes smoked after it is pressed; or it may be dipped in **Zanzibar Liquid Ham Smoke,** which will give it a fine, spicy smoke odor, a nice color and prevents the outside from becoming slimy.

Eleventh:—If they are not smoked or dipped in **Zanzibar-Liquid Ham Smoke,** rub them with White Berliner Brand Konservirung Salt in order to prevent them from getting slimy.



CURING MEATS FOR LIVER SAUSAGE.

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Liver Sausage always contains a certain amount of Meat and Fat in addition to the Liver. This Fat and Meat should be cured for a week or two, before making the Sausage, in a brine made as follows:

1 lb. **Freeze-Em-Pickle.**
8½ lbs. Salt.
5 gals. of Water.

Liver Sausage made from Meat which has been cured in this manner will keep much better after it is made. Where it is necessary to ship Liver Sausage any great distance, or to keep it on hand any length of time after it has been made, the Livers should also be cured in the above brine for two weeks before making the Sausage. The best way to cure the Livers for this purpose is to cut them into strips after they have been chilled for 24 hours and then put them into the brine to cure. Packers who must ship Liver Sausage during the summer months will find the above directions in making Liver Sausage very valuable.

DIRECTIONS FOR MAKING LIVER SAUSAGE.

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Take 70 lbs. of Hog Livers, 25 lbs. of Pork Necks; the entire Boned Head can be used instead of the Necks, or the trimmings which are cut from Bellies will work into Liver Sausage very nicely.

First:—Scald the Livers by pouring boiling hot water over them or dip them into boiling water until they are scalded through to the center. Then throw them into the ice water or put them into a tub of cold water and allow the water to run into the tub until the Livers are cooled through to the center, otherwise, they might sour in a short time.

Second:—Cook the Hog Necks, Heads or Bellies and remove all the meat from the bone.

Third:—Chop the meat as fine as possible. When an Enterprise Grinder is used, grind the meat as fine as it can be ground through a fine plate; then add the Livers, which have also been ground as fine as it is possible to get them. The finer and better the Livers and Fat are ground, the finer and better will be the Liver Sausage.

Fourth:—When grinding, add to 100 lbs. of Sausage:

3 large size Onions.
5 lbs. Bull-Meat-Brand Flour.
6 to 8 ozs. of Zanzibar Brand Liver Sausage Seasoning.
½ lb. of White Berliner Brand Konservirung Salt.

All of these should then be well mixed, and as much of the Water in which the Meat was boiled should be added to the mixture as the Meat will absorb.

Fifth:—Stuff very loosely into Hog Bungs or Beef Casings, and boil very slowly, otherwise, they will burst; never have the water hotter than 155 degrees. The length of time to boil is ½ to 1 hour, which will depend entirely upon the thickness of the Sausage.

Sixth:—After they are boiled, place in ice water, in which they should be kept until they have been chilled through to the center; then remove them from the water and place in the cooler. After the Sausages are chilled rub the casings with some White Berliner Brand Konservirung Salt, to prevent the Sausage from getting slimy.

DIRECTIONS FOR MAKING BRAUNSCHWEIGER LIVER SAUSAGE.

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Braunschweiger Liver Sausage is made of neck pieces from Lean Hogs, Hog Livers, Gut Fat, Trimmings from Bellies and Back Fat, all of which must be steamed before being chopped. For 150 lbs., or less amounts in the same proportion, take:

10 lbs. Gut Fat.
30 lbs. of Belly Trimmings.
20 lbs. of Back Fat.
40 lbs. of Neck Pieces.
50 lbs. of Hog Livers.

First:—Take the above quantities, put them into a kettle and steam them at about 180 degrees or 190 degrees until the meat is tender. Care must be taken

that the water does not boil. It should not be hotter than 190 degrees or just enough agitated to make it simmer.

Second:—Separate the Livers from the other Meat that has been steamed and chop it or grind it fine.

Third:—Take all of the other Meat out of the kettle, strip it from the bones and rinds, put it in a chopper or grinder, and chop, rock or grind fine. The finer the better. While chopping add:

5 large size Onions.

5 to 8 lbs. Bull-Meat-Brand Flour.

10 to 12 ozs. Zanzibar Brand Liver Sausage Seasoning.

½ lb. of White Berliner Brand Konservirung Salt, and as much of the Soup in which the Meat was steamed as the Meat will absorb.

Fourth:—Then put all of the chopped Meat, including the Livers, into a trough and mix all the Meat thoroughly, adding as much more of the Soup while mixing, as the mixture will absorb.

Fifth:—Stuff loosely into Hog Middles or Hog Bungs, and boil very slowly, otherwise, they will burst; boil them until they are filled and swell out. Never have the water hotter than 155 degrees. The length of time to boil is ½ to 1½ hours, which will depend entirely upon the thickness of the Sausage.

Sixth:—After they are boiled, place in cold water—ice water is the best—in which they should be kept until they have been chilled through to the center, but while chilling the Sausages must be turned frequently to keep the grease from congealing to one side; then remove from the water, and place in a cooler. After the Sausages are chilled, rub the casings with some White Berliner Brand Konservirung Salt, to prevent the Sausage from getting slimy.

Seventh:—If it is desired to smoke the Braunschweiger Liver Sausage it can be smoked the following day. The smoking can also be done by dipping the Sausage into Zanzibar Liquid Ham Smoke after they are boiled.

SMOKED COLORED LIVER SAUSAGE.

Soak the casings in a solution of our Improved Zanzibar Carbon for a few minutes before watering, cutting and tying them, or boil the Liver Sausage in water with a little Improved Zanzibar Carbon, the same as boiling Bologna in colored water. This will give Liver Sausage a beautiful smoke color.

BLOOD SAUSAGE.

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Blood Sausage is always made from partially Cured Meat. This Meat should be cured for 10 to 14 days in a brine made as follows:

1 lb. **Freeze-Em-Pickle.**
8½ lbs. Salt.
5 gals. Water.

Blood Sausage made from Meat which has been cured by the **Freeze-Em-Pickle Process** will have a delicious flavor and will keep well in any climate.

Always use Bull-Meat-Brand Flour in making Blood Sausage, as it adds to its keeping qualities and absorbs the Fat and Moisture, preventing the Sausage from drying out and becoming unpalatable.

TONGUE BLOOD SAUSAGE.

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Tongue Blood Sausage is made the same as either Formula No. 1 or Formula No. 2, with the exception that Cured Hog Tongues are added to it. The more Tongues used, the better will be the sausage. Always use Tongues that have been thoroughly cured by the **Freeze-Em-Pickle Process** as they will have a nice red appearance in the Sausage. Boil the Tongues until they are done and then cut into strips and mix into the sausage at the same time as the blood is added.

DIRECTIONS FOR MAKING BLOOD SAUSAGE.

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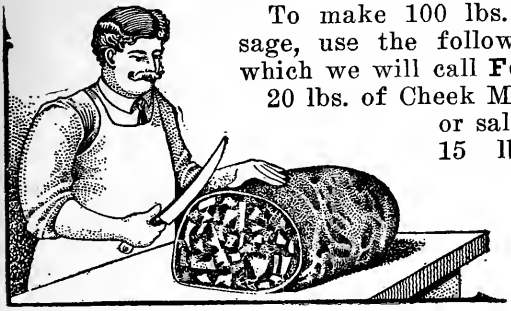

To make 100 lbs. of Blood Sausage, use the following proportions which we will call **Formula No. 1:**

20 lbs. of Cheek Meat, either fresh or salted.

15 lbs. of Hearts, either fresh or salted.

15 lbs. of Pork Rinds, either fresh or salted.

20 lbs. of Pork Speck (back fat), either fresh or salted.

25 lbs. (3 gallons) of Hog or Beef Blood.

5 lbs. of Bull-Meat-Brand Flour.

6 to 8 ozs. Zanzibar Brand Blood Sausage Seasoning.

2 to 3 lbs of Salt, to suit taste.

½ to 1 lb. of **Freeze-Em-Pickle,** according to whether the meat has been salted or is fresh.

Salted Meat is preferable in making Blood Sausage but fresh Meat can be used if desired.

First:—Take 25 lbs. of Fresh Hog or Beef Blood, and stir until the blood remains thin and will not congeal.

Second:—Put the Pork Rinds in a pudding net and boil until about three-quarters done. Care must be taken not to boil them too long, otherwise they will become too pulpy when boiled the second time in the Sausage.

Third:—Boil the Cheek Meat and Hearts until done. The Cheek Meat and Hearts should be boiled as slowly as possible. The slower the boiling the better will be the Sausage.

Fourth:—After they are cooked, put the Pork Rinds in a chopper or Enterprise grinder and cut them as fine as possible. The finer the better. After the Cheek Meat and Hearts have been cooked, they should be cut up coarse by hand, or chopped coarse in a chopper.

Fifth:—The Pork Back Fat must be scalded by pouring boiling water over it for a few minutes. It should then be cut into small squares or cubes by hand or with a pork back fat cutting machine.

Sixth:—After the Meat and Fat are all cut, add to it:

25 lbs. of Blood.
5 lbs. of Bull-Meat-Brand Flour.
6 to 8 ozs. Zanzibar Brand Blood Sausage Seasoning.
Salt to suit taste.

Seventh:—Mix these thoroughly and stuff into Beef Bungs, Beef Middles or Rounds. Fill the casings only three-quarters full.

Eighth:—Blood Sausage should be boiled very slowly, the water should not be hotter than 155 degrees. The length of time for boiling depends entirely upon the thickness of the Sausage. When done, the Sausage will float on top of the water and will be firm and plump. It will be necessary to prick the Casings when boiling to let out the air.

Ninth:—When the Sausage is cooked through, remove it from the kettle and place it in cold water; ice water is the best. Allow it to remain in this cold water until it is thoroughly cooled. Then, place on a board in a cooler and allow it to remain there 24 hours before cutting.

Tenth:—It is always advisable to use pickled or dry-salt cured Cheek Meat and Hearts for Blood-Sausage instead of fresh ones. To cure them especially for Blood Sausage, they should be cured in brine made with **Freeze-Em-Pickle** according to directions in first paragraph of this article, for two weeks before being made into Sausage. Some prefer to grind the Hearts fine, and leave the Cheeks coarse, and if this is preferred, the Hearts can be ground with the Pork Rinds.

Formula No. 2, for making 100 lbs. of Blood Sausage:

30 lbs. of Pork Speck (back fat).
35 lbs. of Pork Snouts or Ears.
30 lbs. of Hog or Beef Blood.
5 lbs. of Bull-Meat-Brand Flour.
6 to 8 ounces Zanzibar-Brand Blood Sausage Seasoning.
1 lb. **Freeze-Em-Pickle** and 3 lbs. of Salt to 100 lbs. of Sausage.

Cook and handle Formula No. 2 the same as Formula No. 1, with the exception of leaving out the Hearts and Cheek Meat.

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Veal Loaf is usually made from Veal Trimmings with some Beef added. When Beef is added, it should be labeled and sold as Veal and Beef Loaf, and when made from Pure Veal it should be sold as Veal Loaf. It is a very profitable article to make from the Larger Veals, which are sometimes of slow sale.

Adding Beef to Veal Loaf improves it, as it makes the Veal Loaf more juicy and gives it a finer flavor than when made from Pure Veal.

The Beef and Veal should be ground or chopped very fine; the finer it is ground the better, and it should have just enough fat with it to prevent it from getting too dry. The amount of fat that should be added will depend upon the quality of the meat used.

After the Meat is ground, add to every 20 lbs. of Meat the following:

2 lbs. of Bull-Meat-Brand Flour.
1 Medium Sized Onion, chopped very fine.
¼ to ½ lb. Salt, according to taste.
2 ounces Zanzibar-Brand Frankfort Seasoning.

Mix all together thoroughly and add sufficient water so as to give the Meat the moisture required.

Put it in a deep bread pan and bake or roast in an oven until it is dry on the outside and is cooked through to the center. The length of time to roast it will depend upon the temperature of the oven and the size of the Loaf.

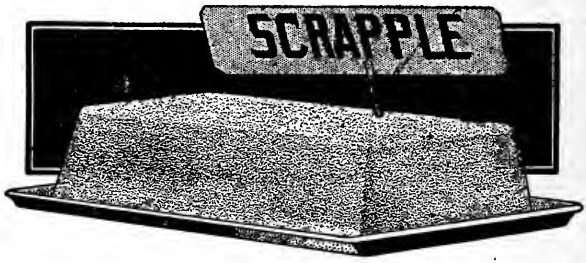
Some used to make a Loaf of the Meat the same as a loaf of bread and put it in a large pan and roast it. When this is done, it requires continual basting, as the juices cook out of the meat to a certain extent; but by taking a deep pan and fill-

ing it with the Veal Loaf, none of the juices can escape. They all remain in the loaf and are absorbed by the Bull-Meat-Brand Flour, and when the meat is roasted, all the juices and fine flavor are retained in it.

Where Butchers are not equipped with an Oven for baking Veal Loaf, they should put it in a deep pan and take it to a Bake Shop and let the Baker bake it. Made in this way it requires no attention while baking, from the time it is put into the oven until it is done.

After Veal Loaf is baked, cool and put it in the ice box and keep cold until wanted for the counter. Do not remove the Veal Loaf from the pan until it is wanted for the counter.

By following the above directions, a most delicious article of food is made and one which will pay a Butcher nicely for his trouble.



SCRAPPLE MADE WITH BULL-MEAT-BRAND FLOUR.

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First:—Cut hogs heads into four pieces, remove the brains, ears, skin, snout and eyes. Cut off the fattest part for lard.

Second:—Put the lean and bony parts in cold water to soak over night, in order to extract the blood and to cleanse it.

Third:—When the heads have been thoroughly cleaned, put them over a fire to boil, using water enough to entirely cover them.

Fourth.—Boil until the meat separates readily from the bones, then remove from the fire and drain off the liquor, saving a part of it for future use.

Fifth:—Remove all the meat from the bones, and chop all the meat up finely and add 2 ounces of Zanzibar-Brand Frankfort Sausage Seasoning to every 20 lbs. of meat; then replace the meat in the liquor in which it was boiled, and again put it on the stove to boil.

Sixth:—While the meat and liquor are boiling, stir in enough Bull-Meat-Brand Flour until the contents are as thick as heavy mush. Stir constantly and boil for the first fifteen minutes, then reduce the fire, or place on the stove where there will be a slow boil for an hour. When done, pour into a shallow dish to mould. When cold, slice thin. It is then ready to fry. The above quantities can be increased as one desires. Every Butcher should make Scrapple and mould it with Bull-Meat-Brand Flour, for then the finest Scrapple is produced.

DIRECTIONS FOR MAKING SUMMER SAUSAGE. (CERVELAT.)

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Use 70 lbs. of Pork Trimmings, 20 lbs. of Lean Beef, 10 lbs. of Pork Back Fat.

First:—Before being made into Sausage, the Back Fat must first be dry salted for two weeks in order to get it properly cured and firm.

Second:—After the Pork Back Fat has been dry salt cured, it should be cut up into small pieces of about one-half inch square.

Third:—The Beef should be first finely chopped; then the Pork Trimmings should be added and then the Pork Back Fat. The meat should be chopped until fine and while it is being chopped add:

2 to 2½ lbs. of Salt.

1 lb. **Freeze-Em-Pickle.**

8 oz. Best Granulated Sugar.

10 to 12 oz. Zanzibar-Brand Summer Sausage Seasoning.

5 lbs. Bull-Meat-Brand Flour.

Fourth:—When the Meat it chopped, it should be packed tightly in pans or boxes, which should be placed in a cooler having a temperature of about 40 degrees; these pans or boxes should hold about 50 lbs. and should be shallow, not over six to eight inches deep, so that the Meat can be thoroughly chilled through. The Meat in these pans or boxes should remain in the cooler from 4 to 6 days before it will be ready to stuff into the Casings.

Fifth:—Stuff the Sausage into Hog Bung Casings or Beef Middle Casings and hang them in a dry room in a temperature of about 45 to 50 degrees for two or three weeks.

Sixth:—They can then be Smoked and are ready for the market.

HOW TO COLOR THE CASINGS FOR SUMMER SAUSAGE.

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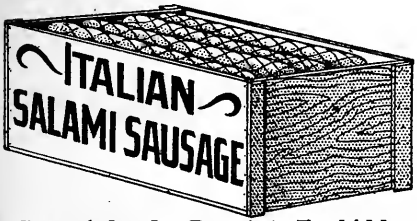
Soak the casings for a few minutes in a warm solution consisting of 1 tablespoonful of Our Improved Zanzibar Carbon in ½ barrel of water, varying the quantity of Zanzibar Carbon according to the color desired. After the casings have a light orange color take them out of the Zanzibar Carbon solution and wash them well in hot water, cut and tie them.

After the Summer Sausage has hung a week or two and is dry, hang it in the smoke house for a few hours to give it a smoke flavor and it is ready for shipment. This will save a large shrinkage and the sausage will have a better appearance. Summer Sausage that has had the casing colored before being stuffed need not become rancid, as it is not exposed to the heat in a smoke house, which heat often causes the stearin and oil in the fat to separate, and as soon as this change takes place the sausage begins to become rancid.

DIRECTIONS FOR MAKING ITALIAN SALAMI SAUSAGE.



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Take 60 lbs. of Pork Trimmings.
20 lbs. of Lean Beef.
20 lbs. of Pork Back Fat.
5 lbs. of Bull-Meat-Brand Flour.
1 lb. of **Freeze-Em-Pickle.**
2½ lbs. of Salt.
8 oz. of Granulated Sugar.
10 to 12 oz. Zanzibar-Brand Summer Sausage Seasoning.
2 to 3 oz. of Vacuum Brand Powdered Garlic.

First:—Before being made into Sausage, the Back Fat must first be dry salted for two weeks to get it properly cured and firm.

Second:—Chop the Pork Trimmings and the Beef quite coarse, coarser than for Summer Sausage. While chopping add the Bull-Meat-Brand Flour, **Freeze-Em-Pickle,** Salt, Sugar, Seasoning and Powdered Garlic, and when it is partly chopped add the Back Fat which has previously been cut in cubes about one-half inch square. By adding the Back Fat last it will still be in quite large pieces when the Meat is sufficiently chopped. The Fat should show quite prominently in Salami, as it must be fatter than Summer Sausage. Two or three ounces of Vacuum Brand Garlic should be added to the Meat while it is being chopped, to give it a delicious Garlic flavor. See page 274. The quantity may be varied according to the demands of the trade.

Third:—When the Meat is chopped, it should be packed tightly in pans or boxes, which should be placed in a cooler having a temperature of about 40 degrees. These pans or boxes should hold about 50 lbs. and should be shallow, not over six to eight inches deep, so that the Meat can be thoroughly chilled through. The Meat in these pans should remain in the cooler from 4 to 6 days before it will be ready to stuff into Casings.

Fourth:—Stuff the Sausage into Hog Bung Casings or Beef Middle Casings and hang them in a dry room in a temperature of about 45 to 50 degrees

for two or three days, then wrap twine around them nicely as shown in cut and again hang up to dry for two to three weeks.

Fifth:—They can then be smoked with cool smoke made with hardwood sawdust only. Wood makes too much heat. Then they are ready for the market.

DIRECTIONS FOR MAKING HOLSTEIN SAUSAGE.

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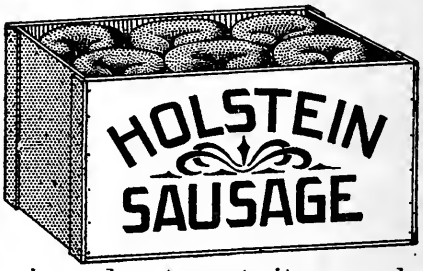

Take 50 lbs. of Pork Trimmings.

40 lbs. of Beef Trimmings.

10 lbs. of Pork Back Fat.

First:—Before being made into Sausage, the Back Fat must first be dry-salted for two weeks in order to get it properly cured and firm.

Second:—Put the Beef into the chopping machine and while chopping it add:

2 to 2½ lbs. of Salt.

1 lb. of **Freeze-Em-Pickle.**

8 oz. of Best Granulated Sugar.

10 to 12 oz. Zanzibar-Brand Summer Sausage Seasoning.

5 lbs. Bull-Meat-Brand Flour.

1 Small Teaspoonful of Vacuum Brand Garlic.

Let the Beef chop until about one-half done before adding the Pork; then chop the Pork and Beef some before adding the square cut pieces of Pork Back Fat

Third:—After the Meat is chopped and spiced put it in shallow boxes or pans not over eight inches thick, and put it in a good cooler. Keep the Meat in a cooler for from 4 to 6 days so it is thoroughly cured before it is stuffed.

Fourth:—Stuff in Beef Round Casings and let the Sausage hang in a dry room at 45 to 50 degrees of temperature for a week.

Fifth:—Then give them a good smoke and they are ready for the market. Cool smoke is produced with hickory, hard maple or oak saw dust only. Wood gives off too much heat.

HOW TO COLOR THE CASINGS FOR HOLSTEIN SAUSAGE.

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Soak the casings for a few minutes in a warm solution consisting of 1 Tablespoonful of our Improved Zanzibar Carbon, in ½ barrel of water varying the quantity of Zanzibar Carbon according to the color desired. After the casings have a light orange color take them out of the Zanzibar Carbon solution and wash them well in hot water, cut and tie them, then stuff the casings and hang the sausage up to dry.

After the sausage has hung a week or two and is dry, hang it in the smoke house for a few days to give it a smoke flavor and it is ready for shipment. This will save a large shrinkage and the sausage will have a better appearance. Sausage that has had the casing colored before being stuffed need not become rancid, as it is not exposed to the heat in a smoke house, which heat always causes the stearin and oil in the fat to separate, and as soon as this change takes place the sausage begins to become rancid.

SWEDISH SAUSAGE.

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Take 60 lbs. of Beef. (Boneless Chucks, Briskets and Shank Meat can be used.)

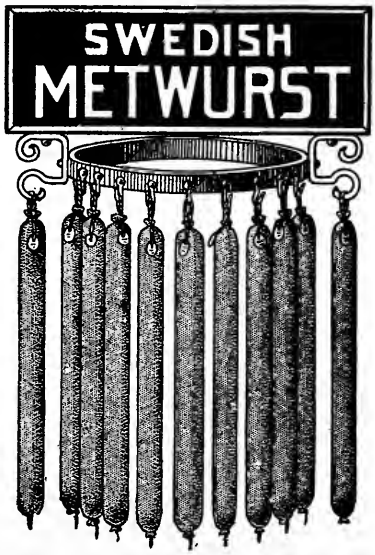
30 lbs. of Pork Ham Trimmings.

10 lbs. of Back Fat.

First:—Before being made into Sausage, the Back Fat must first be dry-salted for two weeks in order to get it properly cured and firm.

Second:—Cut up the Pork Back Fat into square half-inch cubes by hand or with a Pork Back Fat Cutting Machine.

Third:—Put the Beef and Pork on the block



and when partly or coarsely chopped add the cubes of Back Fat, and when the Beef and Pork are cut fine, the Pork Back Fat should show prominently through the meat.

While it is being chopped add:

2½ lbs. Salt.

5 lbs. Bull-Meat-Brand Flour.

1 lb. **Freeze-Em-Pickle.**

8 oz. Best Granulated Sugar.

10 to 12 oz. Zanzibar-Brand Swedish Sausage Seasoning.

Add one to two teacupfuls of Zanzibar Liquid Ham Smoke, which will give that spicy smoke flavor characteristic of all imported Swedish Sausage.

Fourth:—After chopping fine, put the Meat in a trough and knead it with the Bull-Meat-Brand Flour until it is tight and hard.

Fifth:—Pack the Meat tightly in 50 lb. pans or boxes which place in a cooler having a temperature of about 40 degrees; these pans or boxes should be shallow, not over 6 to 8 inches deep, so that the Meat can be thoroughly chilled through. The Meat in these pans or boxes should remain in the cooler 4 to 6 days before it will be ready to stuff into the Casings.

Sixth:—Stuff the Sausage into Beef Middles and hang them in a dry room in a temperature of about 45 to 50 degrees for two or three weeks.

Seventh:—They can then be smoked with cool smoke made with sawdust, and are ready for the market.

HOW TO COLOR THE CASINGS FOR SWEDISH METWURST.

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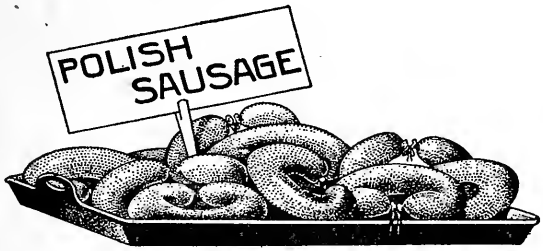
Soak the casings for a few minutes in a warm solution consisting of 1 tablespoonful of our Improved Zanzibar Carbon, in ½ barrel of water, varying the quantity of Zanzibar Carbon according to the color desired. After the casings have a light orange color take them out of the Zanzibar Carbon solution and wash them well in hot water, cut and tie them.

After the Swedish Sausage has hung a week or two and is dry, hang it in the smoke house for a few days to give it a smoke flavor and it is ready for shipment. This will save a large shrinkage and the Sausage will have a better appearance. Swedish

Sausage that has had the casing colored before being stuffed need not become rancid, as it is not exposed to the heat in a smoke house, which heat often causes the stearin and oil in the fat to separate, and as soon as this change takes place the sausage begins to become rancid.



DIRECTIONS FOR MAKING POLISH SAUSAGE.

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Take: 50 lbs of Pork Trimmings.
40 lbs. of Beef Trimmings.
10 lbs. of Pork Back Fat.

Before being used in the Sausage, the Pork Back Fat should be dry-salt cured for at least two weeks or it can be cut from dry salt sides.

First:—Cut up the Pork Back Fat into square half inch cubes by hand or with a Pork Back Fat Cutting Machine.

Second:—Chop the Pork Trimmings, Beef Trimmings and Pork Back Fat quite coarse, and while being chopped add:

2 to 2½ lbs. of Salt.
1 lb. of **Freeze-Em-Pickle.**
10 to 12 oz. Zanzibar-Brand Polish Sausage Seasoning.
8 oz. of Granulated Sugar.
2 to 3 oz. Vacuum-Garlic.
5 lbs. of Bull-Meat-Brand Flour.

Third:—After the Pork Trimmings and Pork Back Fat have been chopped, and mixed with the salt, Bull-Meat-Brand Flour, **Freeze-Em-Pickle** and Vacuum Brand Garlic, stuff into beef round casings.

Fourth:—After the sausage has been stuffed into casings place them in the smoke house and thoroughly smoke with wood. This Polish Sausage should not be boiled when made, it is boiled when eaten.

HOW TO COLOR THE CASINGS FOR POLISH SAUSAGE.

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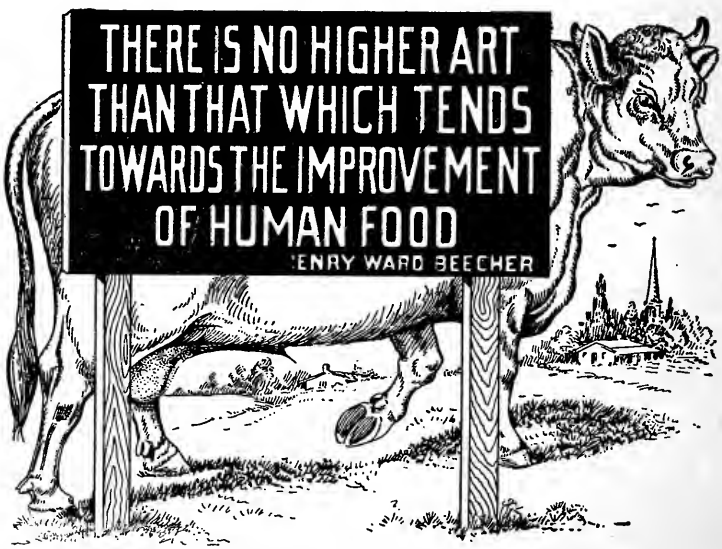
Soak the casings for a few minutes in a warm solution consisting of 1 tablespoonful of our Improved Zanzibar Carbon, in ½ barrel of water, varying the quantity of Zanzibar Carbon according to the color desired. After the casings have a light orange color take them out of the Zanzibar Carbon solution and wash them well in hot water, cut and tie them.

After the Polish Sausage is stuffed, hang it in the smoke house for a few hours, using wood so as to have a hot smoke. This dries it and gives it a smoke flavor. Then it is ready for shipment. This will save a large shrinkage and the sausage will have a better appearance. Polish Sausage that has had the casing colored before being stuffed need not become rancid, as it is not exposed to so much heat in a smoke house, which heat always causes the stearin and oil in the fat to separate, and as soon as this change takes place the sausage begins to become rancid.



CHICAGO, U. S. A.

HOW TO MAKE THE FINEST QUALITY OF BOCKWURST.

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First:—Take 15 lbs. Beef, 5 lbs. Veal, 5 lbs. Lean Pork, 5 lbs. Pork Back Fat (Speck).

Second: — The Meat should all be chopped very fine except the Speck, which should first be cut into small cubes and then added to the rest of the Meat when it is partly chopped so that small cubes of fat will show in the Sausage.

Third: — While chopping, add the following:

1½ lb. of Bull-Meat-Brand Flour.

⅓ lb. of **Freeze-Em-Pickle.**

¾ lb. of Salt.

2 to 3 oz. of Zanzibar-Brand Frankfort Sausage Seasoning.

1 Tablespoonful of very finely cut Chives.

2 Heaping Tablespoonfuls of finely chopped Parsley.

Sufficient water to make the Sausage nice and juicy. Add the water gradually, so it will all work into the Meat nicely. Water should never be worked into Meat except in very small quantities at a time, and the water should be added while the Meat is being chopped.

Fourth:—When the Meat is all cut up fine and properly mixed with the spice, it should be stuffed in Narrow Sheep Casings and turned off in links about 2½ inches long.

Fifth:—As a rule Bockwurst is sold without smoking, but it can be given a light smoke if desired.

Sixth:—To prepare Bockwurst for the table, it should be steamed five or six minutes in hot water.

MEXICAN TAMALES.

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Take the inside Shucks from clean, White Corn and soak them over night in warm water.

Dissolve three ounces of unslaked lime in a quart of water and pour this over one gallon of shelled white corn and add sufficient water to cover the Corn thoroughly. Boil the Corn in this water and lime for two hours and then wash it in clear water and rub off all the skins from the grains of corn. Grind and mash the corn to a thick paste or dough, adding salt to taste. This is the mass.

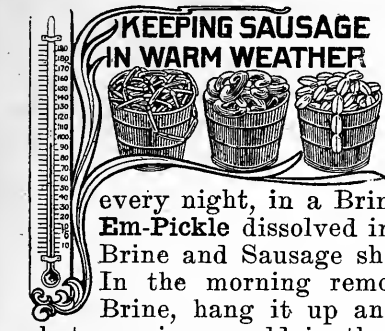
For Pork Tamales, take three to four pounds of Pork, and for Chicken Tamales take three to four pounds of Chicken Meat. Boil the meat until thoroughly cooked, in as little water as will cover it.

While the meat is boiling add 1 to 2 oz. of Zanzibar-Brand Mexican Sausage Seasoning.

When the Meat has boiled until it is tender, run it through a grinder or chop it as fine as possible, and mix with it the Corn Mass as above.

Take one of the Corn Shucks, spread it out on a board and cover all of the big end of it, about two-thirds of its length, with a layer of the corn mass, and on top of this spread a tablespoonful of the prepared meat filling. Roll sidewise, like making a cigarette, and turn down the empty end of the shuck to hold in the contents, and they are ready to sell. Before serving put the Tamales into a steamer and steam for fifteen minutes.

The above formula is the way Tamales are made in Mexico at the present time, but for making them in this country, instead of boiling the corn, as above directed, simply take the regular white corn meal and boil it in water into a regular corn mush, and use this mush for the mass, together with the meat filling.



Pork Sausage, Bologna, Frankforts, Head Cheese, Liver Sausage, etc., can be kept in a fine, fresh condition, by simply putting them, every night, in a Brine made of 1 lb. of **Freeze-Em-Pickle** dissolved in one gallon of water. The Brine and Sausage should be kept in the Cooler. In the morning remove the Sausage from the Brine, hang it up and expose it for sale, and what remains unsold in the evening, simply put back in the Brine for the night.

In this way Sausage can be kept fresh and nice appearing for a number of days and it will not **shrink** and **dry up.** We do not advise letting the Sausage remain in the Brine continually, but simply keeping it in the Brine at night, and hanging it up during the day time. This gives surprisingly good results.

By keeping the Sausage in this way, it does not dry out, nor become moldy as it would if hung up in the Cooler. Sausage can also be shipped a reasonable distance in this kind of Brine, to better advantage than if shipped in any other way.

On arrival it should be removed from the Brine, hung up and allowed to drain and dry. In the evening it should be replaced in the same Brine for keeping over night.

Never put Smoked Sausage and Fresh Sausage in the same Brine. Each kind of Sausage should be kept in a separate Brine.

FRESH TRIPE AND PIGS FEET.

Fresh Tripe and Fresh Pigs Feet turn dark and spoil very easily, but by placing them every evening in Brine made of one pound of **Freeze-Em-Pickle** dissolved in one gallon of water, they can be kept in a good condition for a number of days. Every morning they should be taken out of the Brine, and those not sold during the day should be kept over night in the **Freeze-Em-Pickle** Brine. The Brine for Tripe and Pigs Feet should not be used for storing anything else in it.

SWEET BREADS AND BRAINS.

Sweet Breads and Brains can also be kept in the same way as Tripe and Pigs Feet.

RENDERING LARD

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One of the things much neglected in many butcher shops is the making of Lard. Butchers who do not cut up enough hogs to have fat for making Lard each day, allow the fat to accumulate until they have sufficient so as to make it worth their while to render it. Many butchers do not keep this fat in the ice box, but let it stand anywhere, because they imagine that it does not spoil; then, when they make Lard out of it, they wonder why the Lard is not better.

Lard should always be made as soon as possible, and the fat trimmings should be kept in the cooler and not allowed to remain standing around in a warm place. To make high grade Kettle-Rendered Lard, always cut the rinds off of the fat. The rinds can be put into pickle and stored until a quantity has accumulated and then they can be cooked and utilized in Liver Sausage, Head Cheese or Blood Sausage. When the rind is cooked with the lard, it always causes more or less detriment to the lard.

Before rendering, if one has the machinery, the fat should be run through a regular fat hasher or an Enterprise Grinder, and it should be ground up into small pieces. The smaller it is ground the better, for if the fatty tissues are thoroughly mangled and disintegrated, the oil will separate more readily when the heat is applied. Those butchers not having a machine in which they can cut up the fat should cut it into small pieces by hand.

For making Kettle-Rendered Lard a steam jacket kettle is the best, but if one does not have steam, a common caldron will answer, but great care must be taken not to scorch the lard or allow it to become too hot when a caldron is used.

RENDERING LARD IN JACKET KETTLE OR CALDRON.

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Before putting the fat into the kettle, put in a gallon of water for every 100 lbs. of fat, as the water prevents the lard from scorching. Then put in all the fat to be rendered and start the fire or slowly turn on the steam, as the case may be.

In rendering Lard the heat should be brought up gradually, so that quite a little of the fat is melted before the full heat is applied. If the heat is brought up too rapidly, it will cause the Lard to be darker in color than when it is gradually heated.

Lard should be boiled about 1½ hours after the entire mass is boiling.

Those butchers who wish to render their Lard scientifically, with the aid of a thermometer, can do so by hanging a thermometer in the Lard and bringing the temperature gradually up to 255 to 260 degrees Fahrenheit, and then turn off the steam or check the fire, as the case may be, and allow the Lard to cook slowly until it is finished.

A butcher can always tell when the Lard has cooked sufficiently by the way the cracklings press out.

After the Lard has all been tried out, skim out all the cracklings, put them into a press and press out all the Lard, adding what is pressed out to that in the kettle.

Now the Lard is ready to be strained through a piece of cheese cloth.

LARD PRESS

IF ONE HAS A LARD SETTLING TANK, AS HERE ILLUSTRATED, HANDLE THE LARD AS FOLLOWS:

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SETTLING TANK

After treating the Lard as directed, with Lard Purifier and water, and after the Lard has been treated enough to make it foam, and the foam has been skimmed off, dip the Lard and water out of the kettle, run it through a piece of cheese cloth into the settling tank. A settling tank is simply a galvanized iron tank with a large faucet at the bottom. The bottom can be made to taper to the center and the faucet placed in the center, so all the water can be drained off, or the bottom can be made flat with the faucet close to the bottom, and the tank can be set slanting, so the water or Lard will all drain out.

After the Lard is in the settling tank, let it settle for one or two hours, according to the size of the tank and quantity of Lard in it. Then drain off all the water and the impurities which have settled to the bottom. After these are drawn off, the Lard is ready to be run into buckets, which should be placed in the ice box to cool.

A better way is to let the Lard settle in the settling tank and, after the water is drawn off, stir the Lard with a large paddle until it is thick and creamy, and then it should be put into buckets. By letting it cool in the settling tank and stirring it until it is thick and creamy, Lard will have a much better appearance when cold than Lard that is run into buckets hot.

HOW TO PURIFY LARD WITH ONLY A COMMON RENDERING KETTLE.

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After the Lard has been rendered as above, treat as follows: The kettle must not be too full of Lard; it should not be more than three-fourths full when being treated with the Purifier.

Put a thermometer into the Lard to test the temperature. If the temperature of the Lard is below 200 degrees Fahrenheit, add to every 100 lbs. of Lard 3 ounces of B. Heller & Co.'s Lard Purifier, dissolved in one quart of water. For example, if the kettle contains 400 lbs. of rendered Lard, add 12 ounces of Lard Purifier dissolved in one gallon of water.

Should the temperature of the Lard be over 200 degrees F., do not add the Lard Purifier and water, but let the Lard stand for half an hour or so, until the temperature comes below 200 degrees.

If the Lard Purifier and water are added to the Lard when it is as high as 212 degrees F., the water will at once be converted into steam as soon as it gets into the Lard, because water is converted into steam at that temperature. When the Lard Purifier and water are added to Lard that is too hot, the Lard will foam up and boil over; but, when the Lard is below 200 degrees F. and the Lard Purifier and water are added, it will not boil up.

After adding the Lard Purifier and water, take a paddle and stir the Lard thoroughly, so the Lard Purifier is mixed thoroughly with every part of the Lard; then turn on the steam or build up the fire slowly, as the case may be, and heat the Lard up to 212 degrees F. The minute 212 degrees is reached the Lard will begin to foam. When the Lard gets to this point, it should not be left for a moment, because if it gets too hot it will boil over the top of the kettle; but if one stays right with it when it begins to foam, and checks the fire, it will not boil over but will foam a little and most of the impurities will rise to the top of the Lard. Now stop the fire and skim off all the impurities on the top of the Lard and allow the Lard to settle for about two hours, when all the water and the smaller impurities that did not rise to the top will have separated from the Lard and will be at the bottom, and one will be

surprised at the amount of impurities that will thus be separated from the Lard.

If the kettle has a faucet at the bottom, draw off the water and the impurities which have settled and then run off the Lard. Should the kettle not have an opening at the bottom, dip out the Lard from the top, being careful not to dip out any of the water which will be at the bottom. When most of the Lard has been taken out, that remaining, which is near the water, can be dipped out together with the water, and put in a bucket or tub and allowed to harden.

The lard will float on the top and when hard can easily be taken off from the top of the water, and should be kept until the next Lard is rendered, when it should be re-melted with the next batch of Lard.

Before running the Lard into buckets, it is always well to run it through a piece of cheese cloth, so as to remove any small pieces of detached cracklings. It is advisable to put the Lard into the ice box as soon as it is run into buckets, so as to set it, which will prevent the separation of the oil from the Stearin.

IF ONE HAS NO SETTLING TANK, BUT SIMPLY HAS A RENDERING KETTLE AND AN AGITATOR, HANDLE LARD AS FOLLOWS:

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First:—Render the Lard in the Rendering Kettle, and treat it with B. Heller & Co.'s Lard Purifier, the same as directed in the foregoing. After it is treated, run the Lard through two or three thicknesses of cheese cloth, into the Agitator. Allow it to settle in the Agitator for two hours, then run off all the water from the bottom, and start the Agitator. The Lard should be agitated until it is thick like cream, then it is ready to run off. We, however, recommend that Lard should be taken from the Rendering Kettle and put into the Settling Tank and allowed to settle, and then the Lard should be run from the Settling Tank through the faucet about an inch above the bottom, into the Lard Cooler, and while in the Cooler it should be agitated until it becomes thick. There are always small particles of charred tissue which will settle to the bottom of the Settling Tank, which cannot be gotten out in any other way, and the Lard will be whiter and purer if allowed to settle in the Settling Tank and then drawn off into the Cooler.

IF ONE HAS A LARD SETTLING TANK AND AN AGITATOR, HANDLE THE LARD AS FOLLOWS:

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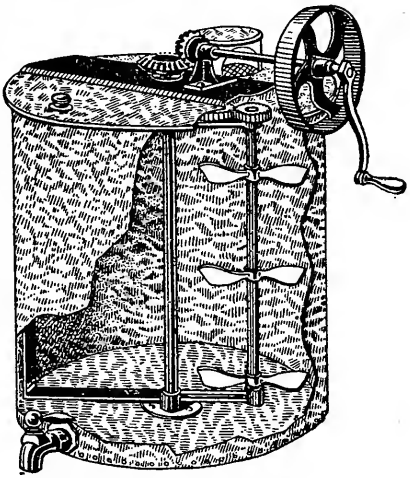

COOLER AND AGITATOR

A Packer or Butcher who makes any quantity at all of Kettle Rendered Lard, should have a Rendering Kettle in which the Lard is rendered, a Settling Tank in which the Lard is settled, and a Lard Cooler with an Agitator in it. The Lard Cooler and Agitator should be double-jacketed, so that cold water can be run into the jacket to cool the Lard.

When equipping a plant with a Settling Tank and Cooler, we advise that the Settling Tank have two faucets in it; one at the extreme bottom and the other about one inch from the bottom. Then, when the water is drawn off of the Settling Tank, it should be drawn off from the lowest faucet, and when the Lard is drawn off into the Agitator, it should be run off through the faucet which is an inch from the bottom. In this way, small particles which may be in the Lard will remain in the bottom of the Settling Tank, in the one inch layer of Lard which remains in the bottom of the Settling Tank. After all the Lard is run off through the upper faucet, what remains between the upper faucet and the bottom of the Settling Tank should be drawn off through the lower faucet and should be kept until the next time Lard is rendered, and then should be re-rendered with the next batch.

After the Lard has been rendered and has been treated in the Rendering Kettle, with the Lard Purifier, strain it through a cheese cloth into the Settling Tank, allow it to settle for two hours, then draw off all the water from the bottom faucet. After the water has been drawn off, draw off the Lard from the top faucet and again run it through cheese cloth, into the

Cooler and Agitator. Start the Agitator and allow it to run until the Lard is thick and white, like cream, and then run it off into buckets or tubs.

A good way to set up the Settling Tank and the Cooler and Agitator, is to have the Settling Tank high enough up, on a bench above the Agitator, so that the Lard can be run out of the Settling Tank into the Agitator. The Cooler and Agitator should also be high enough from the floor so the Lard can be run from it into buckets or tubs.

It costs very little to properly equip oneself with the proper apparatus, and if properly rigged up it is a pleasure to make the Lard and requires very little work.

HOW TO PURIFY AND SWEETEN RENDERED LARD.

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First:—Put 100 lbs. of water into the lard kettle and add to it one-quarter to one-half pound of B. Heller & Co.'s Lard Purifier; then on top of the water put 100 lbs. of the rendered Lard.

Second:—If a steam kettle is used, turn on the steam; and if the kettle is heated by fire, start the fire; the heat should be applied slowly and must be closely watched, so that the Lard does not get too hot and boil over. In no case should more Lard and water be put into the kettle than to fill it one-half full. By thus having the kettle only half full it leaves plenty of room for the Lard to boil and foam and prevents it from boiling over the top of the kettle.

Third:—While the Lard is being heated stay right with it at the kettle to watch it and continually stir it.

Fourth:—When the Lard begins to boil check the fire and let it simmer from 10 to 15 minutes, then put out the fire or turn off the steam and let the Lard settle for about three hours; all the impurities that come to the top skim off carefully.

Fifth:—After the Lard has settled for three hours all the water will be at the bottom. If the kettle is provided with a faucet at the bottom so the water can be let off, let the water run out slowly until it is all drained out; if the kettle has no opening in the bottom, skim the Lard off from the top of the water and place the Lard in a Lard Cooler. If you have a

Lard Cooler with an Agitator, start the Agitator and keep it running until the Lard gets thick like cream; it is then ready to run off into buckets. If you have no regular Agitator, it is necessary to stir the Lard by hand occasionally until it gets thick and creamy; stir it as much as possible until it gets thick, and then run it into buckets.

LARD NOT PURIFIED.

If Lard is made without taking out the impurities with water and our Lard Purifier, the Lard will become rancid if it is to be kept during the hot weather, and it will not be so sweet in flavor nor as clean and white as it is when treated with our Purifier according to the preceding directions. Our Lard Purifier neutralizes the free fatty acids in the Lard, thus preventing rancidity and keeping the Lard Sweet and Pure.

Lard made with our Lard Purifier according to the foregoing directions will comply with the regulations under the various Pure Food Laws.

COMPOUND LARD.

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In the Southern States, where the climate is warm, it is necessary to add either Tallow or Tallow Stearin or Lard Stearin to Lard, so as to stiffen it in order that it can be handled at all.

To make Compound Lard, first render the Lard and press out the cracklings as directed; then add from 10 to 20 per cent of either Tallow, Tallow Stearin or Lard Stearin and stir until it is all melted and thoroughly mixed with the Lard. The quantity of Tallow or Stearin to add depends upon the climate and season of the year, and also the price of the different materials.

After adding the above, purify the mixture, the same as directed for handling Pure Lard. However, Compound Lard must always be agitated until it is thick and cream-like before it is run into buckets. If one has no Lard Agitator, it must be stirred by hand until it is stiff and cool.

It is perfectly legal to add Tallow, Tallow Stearin or Lard Stearin to Lard for this purpose, but such

Lard must be sold as Compound Lard. It cannot be sold as "Pure Lard" when these ingredients are added to it.

COTTON SEED OIL-LARD COMPOUNDS.

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For certain purposes Cotton Seed Oil added to Lard is preferred to straight Lard, and the Cotton Seed Oil is added after the Lard has been purified and is ready to put in the Agitator.

To make a really good Compound Lard, a Cooler with an Agitator is absolutely necessary, but if one hasn't a cooler with Agitator, it can be done by stirring by hand continuously, so the Lard and Oil do not separate while cooling.

When Cotton Seed Oil is used, it must be Refined Cotton Seed Oil, and the more it is refined the better the compound will be. Lard should always be run through cheese cloth before putting it in the Lard Cooler, so as to take out any small particles of detached cracklings which may remain in the Lard.

The formula for making Compound Lard with Cotton Seed Oil varies according to the relative values of the ingredients and the quality of Compound desired. The usual Compounds found on the market, as sold at the present time under trade names, and which contain no Lard at all, are made of 80 per cent Cotton Seed Oil and 20 per cent Tallow Stearin . (Tallow Stearin is Tallow with the oil pressed out of it.) A small butcher can make this Compound by using 80 per cent Cotton Seed Oil and 20 per cent Rendered Tallow, which has previously been purified with B. Heller & Co.'s Lard Purifier.

If it is desired to make a better quality of Compound, use less Cotton Seed Oil and add sufficient Lard to bring the cost and quality to the desired degree.

All such Compounds must be sold as "Compound Lard" when Lard is added; but when no Lard is added, they must be sold as "Lard Substitutes." These preparations are perfectly legal, and comply with the Pure Food Laws provided they are labeled and sold for what they are, but no one should make a Lard Compound or Imitation Lard and sell it for Pure Lard.

REFINING LARD WITH FULLER'S EARTH.

THE METHOD USED FOR REFINING LARD IN LARGE PACKING HOUSES.

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The large packers all refine Lard and Tallow with the Fuller's Earth process, and for the benefit of the small packers, who would like to know how it is done, we will give the full directions, although a small packing house can hardly afford to put in a plant for the process, as it requires a man who is experienced to refine Lard and Tallow in this manner. If a packing house does not make enough Lard and Tallow to afford to keep a man especially for this purpose, it will not pay to put in a refinery, which consists of the following machinery: A Receiving Kettle, which is a large open tank with steam coils in it to dry the Lard or a large Jacket Kettle will do. A Clay Kettle, which is a tank with steam coils in it for heating the Lard and an air pipe at the bottom of it connected to an air compressor. A Lard Cooler with Agitator to cool and stir the Lard while it sets so as to have it thoroughly mixed. A Pump, Air Compressor and Filter Press. An ordinary size outfit will cost from $2,000 to $3,000.

First, the Lard, Tallow or Cotton Seed Oil, which is termed stock, is placed in the Clay Kettle. The Clay Kettle is simply an iron jacket with a coil in the bottom of it through which air is pumped. In this kettle, the Fuller's Earth is added. To each and every 100 lbs. of stock, there is added from one to two lbs. of Fuller's Earth; the quantity depending upon the grade of stock. Before the stock is treated a small test is made as follows. A small quantity is heated; in a part of it one per cent of clay is put, in another part 1½ per cent, and in another two per cent. Mix each lot thoroughly, put them into a funnel over filter paper and allow them to filter. By examining these samples, one can tell how much earth to use to the stock in the kettle. This must be done when the stock varies. Of course, when the Lard, Tallow, or Oil are running uni-

form, it is not necessary to make the test, but where the stock changes, it is always advisable to test before treating, for the reason that too much Fuller's Earth put into the stock will give the Lard an objectionable flavor. Before stock of any kind can be treated with Fuller's Earth, all the moisture must be out of it; Lard usually contains two to three per cent of moisture, and very often considerably more, so it must be heated in a Jacket Kettle until all the water is evaporated. If there is any water in the Lard, the Fuller's Earth attacks the water first, and the Lard is not affected, because wet Fuller's Earth has absolutely no effect upon Lard. When the Fuller's Earth is added to Lard, it must be 155 degrees hot; Tallow must be 185 degrees hot, and Cotton Seed Oil 140 degrees hot. After the desired heat is obtained, regulate the steam so the temperature will remain stationary, turn on the air, and when it is blowing hard, put in the Fuller's Earth and blow for about 20 minutes; then start the force pump and pump the stock through the Filter Press. If the stock is of fine quality and only a small percentage of Fuller's Earth is used, it can be pumped directly into the Receiving Kettle, but if a large percentage of Fuller's Earth is used, it is advisable to let the Lard run back into the Clay Kettle, and keep on letting it run through the filter and pumping it round until it is thoroughly clarified; then allow it to run into the Receiving Kettle.

If inferior stock is used, sometimes as much as four and five per cent of Fuller's Earth is used to refine it, but it is not advisable to use that large amount as the clay gives off an odor which the stock sometimes absorbs. Always use the least amount of clay that good judgment indicates will do the work, and after pumping through the filter, if it is not as it should be add more clay and refilter it.

To make Compound Lard, treat the different stocks separately, run them in different tanks, and then mix them. After they have been put into the receiving tank or the mixing tank, it is advisable to mix them by blowing air into the bottom of the kettle in which are

Lard, Tallow and Oil; this will mix even better than any process or method that we know of. The amount or kind of stock to be used depends upon the season of the year, and the kind and quantity of goods you wish to make. Equal parts of Tallow, Lard and Oil make a very good Compound. All the cloths for the Filter Press should be washed every day after using them as they must be kept perfectly clean; the cleaner the better.

After the Compound Lard has been thoroughly mixed it must be put into an Agitator and agitated until it is thick like cream before it is run off into buckets.

HOW TO RENDER TALLOW WHITE, ODORLESS, FLAKY AND SOFT LIKE LARD.

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It is an easy matter to render Tallow so it will have a very light color, in fact, will be almost white and at the same time flaky and soft like Lard, if the instructions which follow are carried out. When so rendered, the Tallow will sell at a good price, as it will be entirely free from a tallowy odor, and is an excellent thing for baking purposes. Tallow rendered according to these instructions can be mixed with Lard and it will even improve the Lard.

Take Beef Suet and all the Beef Fat trimmed from steaks and other cuts, and run it through an Enterprise Chopper, chopping it very fine. It will thus become soft and sticky so it can be rolled up in small balls about one and one-half to two inches in diameter. While this is being done, fill the Rendering Kettle half full of water, dissolving in the water about two ounces of Lard Purifier to every 100 lbs. of Tallow to be rendered, and start it to boil. While the water is boiling the small balls of Tallow should be placed on top of the water until a sufficient number of balls have been thus put into the water to make a layer three or four inches deep, but not deeper. After the Tallow is rendered out of the balls, the heat should be turned off and the Tallow should be permitted to cool. Just as soon as the boiling has ceased, all the cracklings that are on the surface should be skimmed off, put into a press and

pressed out. The Tallow that is on the surface should be skimmed off and put into buckets. Care should be taken that no water is taken out with the hot Tallow. The tallow which remains on the water can be left there until it is hard, when it can be taken off and melted if desired, and then run into buckets. The advantage in rendering Tallow in this manner is to prevent the Tallow from becoming too hot, and thus to keep it from turning dark; besides, the water and Lard Purifier purifies the Tallow and also draws out the tallowy odor.

Any butcher can build up a large trade on home-rendered tallow when it is prepared in this manner. In fact, his trade will like the Tallow so well that he will not be able to supply the demand. As a rule, the butcher sells his Tallow unrendered at a low price, but if he will render it himself and follow the above instructions carefully, he can sell the Tallow for at least 10 to 12 cents per pound, owing to the fact that Tallow rendered in this manner produces the very finest fat for cooking purposes, it is much better than Lard.

NEAT'S FOOT OIL.

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Neat's Foot Oil is made by simply boiling the feet of cattle in a water bath, in an open kettle. The oil will come out of the feet and float on the top of the water. After the oil has been cooked out of the feet, they should be skimmed out of the kettle. The oil should then be treated with our Lard Purifier, the same way as directed for treating Lard. Simply let the water and fat cool down to 200 degrees Fahrenheit or below, and to every 100 lbs. of oil add about four ounces of our Lard Purifier dissolved in a quart of water. Stir the water, Lard Purifier and Neat's Foot Oil thoroughly, and then start up the fire and bring it to a boil. Skim off any foam and impurities that may come to the surface and then stop the fire and allow it to settle about two hours; then skim the oil off of the top of the water, and you will have absolutely pure, sweet and refined Neat's Foot Oil.

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First:—Clean the Feet as carefully as possible and then cure them in brine made as follows:

10 lbs. of Salt.
1 lb. of **Freeze-Em-Pickle.**
5 gals. of Water.

The Feet should be cured in this brine from four to five days. This brine can be used over and over again for curing Pickled Pigs Feet, until it becomes thick from the substances drawn out of the Feet.

Second:—After the Feet have been cured for four or five days, cook them as follows: Heat a kettle of water boiling hot; then throw the Pigs Feet into it and keep the heat on until the water begins to boil; then check the fire or steam, and simply let the water simmer just as slowly as possible until the Feet are nicely cooked. The slower they cook, the better, and they ought to remain in the hot water for about four hours, when cooked at a low temperature.

Third:—When they are cooked through, turn on cold water and let the water overflow until all the heat is out of them, and nothing but cold water overflows, and then let the Feet cool well.

Fourth:—Split the Feet through the center and pack them. If they are to be packed in tierces and kept on hand for any length of time, the vinegar that is put over them should be 60 grains strong, but when they are packed in small packages for immediate use 40 grains is strong enough.

Fifth:—When packing the Feet add to every 100 lbs. 8 to 10 ounces of Zanzibar Brand Pickled Tongue Seasoning.

STORING PICKLED PIGS FEET.

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There are certain seasons of the year when Pickled Pigs Feet are in great demand, while there are other seasons when they are a slow sale. We, therefore, give here a formula for keeping Pickled Pigs Feet in vinegar so they can be kept for one year if necessary in a perfect condition. Salt, cure and boil the Pigs Feet the same as above, but instead of boiling them all done, boil them only about half done; then split them and put them in tierces and fill the tierces with 60-grain vinegar and store in cold storage. The 60-grain vinegar has a tendency to soften the meat. After they have been in this strength of vinegar for some length of time, they will become soft just as if they were thoroughly cooked, but if it is necessary to use them before they are soft, roll them into the engine room or in a place where it is very warm, and turn the tierces on their end. Keep the top of the barrel covered with water—we mean on the top of the head—so that the head will not dry. The bottom of the barrel will not shrink and dry because the vinegar on the inside keeps it moistened, but if the top is not kept wet the barrel will shrink and begin to leak. By allowing the Pigs Feet, which are packed in strong vinegar, to remain in a very warm place for a week or so, they will become nice and tender; they are then to be repacked with 40-grain vinegar in small packages for the market.

PICKLING TRIPE.

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Select Tripe that is fresh and has not been lying around long enough to attract the bacteria ever present in the air.

Tripe should be prepared by thoroughly cleaning and washing the paunch in at least three or four changes of water. After that, a tub of cold water

should be prepared and a lump of unslaked lime, the size of an English Walnut, should be added to about 50 gallons of water. Allow the lime to dissolve and then stir the water to thoroughly mix it. In this solution place the washed Tripe and allow it to soak for five or six hours. The water should be kept cold. A small piece of ice may be put in the water if necessary. Before the Tripe is put into the last soaking water, the inside should be scraped with a hog-scraper so as to remove the inside skin. The outside film or skin should also be scraped off. The boiling vessel should be thoroughly washed before the Tripe is placed in it for cooking. If there is any foreign substance whatever in the kettle, it will discolor the Tripe. On the other hand, it may be turned out perfectly white if the boiling vessel is in proper condition. Two ounces of B. Heller & Co.'s Lard Purifier mixed in 50 gallons of boiling water will assist to keep the Tripe White.

Scald the Tripe thoroughly and scrape both sides well with a hog-scraper. The Tripe is then ready to be cooked.

In cooking, allow the water to come to the boiling point. It should then be reduced to a simmer until the Tripe is thoroughly cooked. When cooked, cold water should be turned on and allowed to overflow until the Tripe has thoroughly cooled. After it is thoroughly cooled, pack in tierces with vinegar that is 60 degrees strong. Always use White Wine Vinegar. If it is desired to ship Tripe after it has been vinegar-cured, it should be repacked in vinegar 38 to 40 degrees strong.

To give the Tripe a nice flavor, add to every 100 lbs. of Tripe 8 to 10 ounces of Zanzibar Brand Pickled Tongue Seasoning.

Many have trouble through their inability to cook Tripe tender. This, in most cases, is owing to the fact that the Tripe is boiled too much in water that is too hot. Water in which Tripe is being cooked should be allowed to come to a boil, after that, it should be put on a slow fire where it will cook the Tripe by simmering. A simmer is water that is hot, but not boiling, or 155 to 160 degrees. Boiling water will always shrink and toughen Tripe. It will take longer to cook some Tripe than others, depending upon the age of the animal from which it is taken. Tripe should be allowed to simmer until it is cooked tender.

MINCE MEAT.

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The following directions will make a most delicious Mince Meat:

Take 4 lbs. of lean Beef, boil it until it is fairly well cooked and then chop or grind it very fine.

Add 8 lbs. of Hard Green Apples, cut into small cubes.

1 lb. of very finely chopped suet.

3 lbs. of seeded Raisins.

2 lbs. of Picked Currants, carefully washed and dried.

2 to 5 lbs. of Citron, cut up into small pieces.

1 lb. of Brown Sugar.

1 pint Cooking Molasses (pure New Orleans Molasses is the best, and it must be free from Glucose).

1 quart of Sweet Cider.

1 Tablespoonful of Salt.

1 Teaspoonful of Ground Black Pepper.

1 Teaspoonful of Mace.

1 Teaspoonful of Allspice.

½ Teaspoonful of Cinnamon.

A little grated Nutmeg.

A pinch of Cloves.

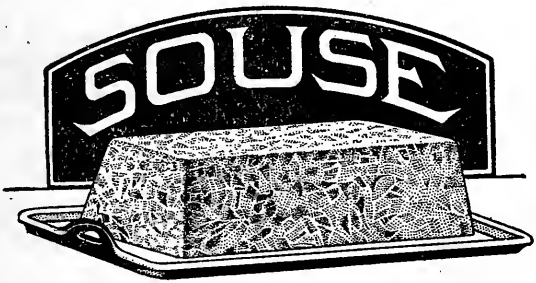
Mix the above thoroughly, then heat slowly on the stove and boil for half an hour.

If the Mince Meat is to be put in jars and sealed up tight, the hot Mince Meat should be put into pint and quart jars, the jars should be filled up to the brim and the tops screwed down tight immediately.

If the Mince Meat is to be kept in bulk and not sealed up in jars, add ½ pint of good Brandy after the Mince Meat has been cooked and allowed to become nearly cold, stirring the Brandy into the Mince Meat thoroughly and then pack into stone crocks, cover tightly and keep in a very cool place where the Mince Meat will not freeze. This Mince Meat will keep all winter.

The above quantities can be increased or decreased proportionately, according to the total amount of Mince Meat desired at one time.

Dry or concentrated Mince Meat is made same as above, except that dried apples are used instead of fresh apples, and no liquids are added. Wet Mince Meat is better than the dry and will give better satisfaction.



DIRECTIONS FOR MAKING SOUSE.

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First:—Take nicely cleaned Pigs Feet, Pigs Snouts, Hocks, Tails or Ears, and put them in a kettle on a stove, or fire or in a steam jacket kettle.

Second:—Add just enough cold water to entirely cover them.

Third:—Boil until the Meat can be removed from the bones.

Fourth:—Remove the Meat from the bones, and put it back into the water in which it was boiled; then add to this water enough White Wine Vinegar to give it a nice sour taste. The quantity of vinegar will depend upon its strength.

Fifth:—Add the following proportions of spice, which can be changed to suit the amount of Souse you are making. For 100 lbs. Souse use:

2 lbs. of Granulated Sugar.

8 to 10 oz. Zanzibar-Brand Pickled Tongue Seasoning.

Sixth:—Mix the spice with the Meat, and boil about 15 minutes; then remove from the fire. Put the Souse into square tin pans, and allow it to set 24 hours before removal. If desired, a lemon and 2 or 3 good sized Onions may be cut into small pieces, and mixed in the Souse before it is boiled; some like this, and some prefer it without Onion or Lemon. Do not use too much Lemon as it will make the Souse taste bitter.

VINEGAR PICKLED PIGS TONGUES.

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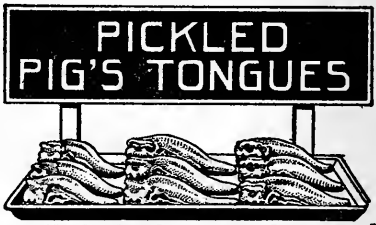

Take salted Pigs Tongues that have been cured for 30 days and scald them in hot water; then remove the skin and gullet. Boil slowly for three hours, the same as boiling Pigs Feet; the slower they are boiled the better; then cool the Tongues, in the same manner as directed for cooling Pigs Feet.

Another way is to take them out of the Brine and cook them, and then take off the skin and gullet after they are cooked. When handling large quantities, this latter method will not work as well as the first method, because after the Tongues are boiled, they must be cooled in the same vat, and after they are cooled, the skin does not remove so easily. That is why it is better to scald them in boiling water first and then remove the skin and gullet, then boil them.

Split the tongues through the center and pack in Vinegar the same as Pigs Feet and add to every 100 lbs. of Tongues 8 to 10 ounces Zanzibar-Brand Pickled Tongue Seasoning.

HORSERADISH.

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Home-made horseradish is a relish that every household demands. It is impracticable to put grated horseradish upon the market except when bottled, as exposure to the air discolors it and dries it out. An excellent bottled article which will prove a good keeper as well as a good seller can be made as follows: To ten parts of grated horseradish add one part of granulated sugar and one part of pure vinegar. In preparing horseradish none but white wine vinegar should be used. One of the best means of getting new trade is for a Butcher to sell home-made grated horseradish.

CHICAGO, U. S. A.

SAUER KRAUT.

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Select sound cabbages and peel off the first or damaged leaves, then slice or shave with a cabbage cutter as fine as possible. The object desired in making first-class Sauer Kraut is to obtain a perfect fermentation under pressure with the aid of salt alone. The brine, therefore, results from the water contained in the salt and cabbage, no water being added. First secure a good strong cask, which should be well scalded and cleaned. Sprinkle on the bottom of this cask a small quantity of salt, then put in a layer of cabbage and while adding the cabbage sprinkle some salt through it, so that the salt is as much divided as possible and then tamp well with a wooden tamper, so as to pack it as tight and solid as possible. Continue putting in layer of cabbage and tamping this way until the barrel is full. The salt to be used should always be of the best grade and one pound of salt to one hundred pounds of cabbage should be used but may be varied according to the taste. Some prefer it saltier than others. After the cask is filled or as full as desired, the cabbage should be covered with a clean cloth on which should be laid hardwood boards. Use the boards taken out of the head of a whiskey barrel or tierce as this makes the best cover, as they fit in the barrel and are made of hardwood and will not give the cabbage a taste. Carefully weight the boards down with heavy stones, always remembering that the fermentation should be accomplished under pressure. Once a week take off the stone, board and cloth from the cabbage and wash them clean and replace the cloth and boards and stones on top of the barrel after they have been washed. By repeating the washing of the boards and cloth and stones every

week, the top of the cabbage will be kept perfectly sweet and the foam which comes to the top is removed, so that the top of the Sauer Kraut will be as good as that in the bottom of the barrel. The Kraut should be left to ripen for about four weeks in a warm temperature. It is always best not to offer it for sale until it has sufficiently ripened and is tender and juicy and that it has the proper flavor. This can only occur after perfect fermentation has taken place.

PICCALILLI.

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This sauce is easily prepared and is in considerable demand by some trades. Select good, firm, green tomatoes, wash them thoroughly and cut away all defective portions of the tomatoes. They should then be sliced or quartered and placed in a salt brine made with one pound of salt to each gallon of water with a supply of green peppers. Let them cure in this brine for two weeks. They may then be taken out and chopped very fine, about ⅛ to ¼ inch in diameter. They are then ready for the vinegar, which should be pure in quality, the white wine vinegar being preferred. The vinegar should be first prepared or sweetened and spiced with pure granulated cane sugar, cloves, cinnamon, mustard seed and a small quantity of celery seed. This can be poured over the chopped tomatoes and peppers, either hot or cold. Piccalilli should be sold nearly or quite strained of its vinegar.

CHOW CHOW.

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Chow Chow is a popular sauce that can be readily prepared. It is strictly a Chinese innovation which was introduced to the American palate during the first immigration of Chinamen. It is merely the cucumber pickle cut up into small pieces with the addition of cauliflower, onions, etc., over which is poured a preparation of mustard, vinegar and various condiments which taste may demand. Chow Chow is a good keeper and a good seller, but in order to retain its flavor and color, it should be carefully covered and kept from exposure to the air.

DILL PICKLES.

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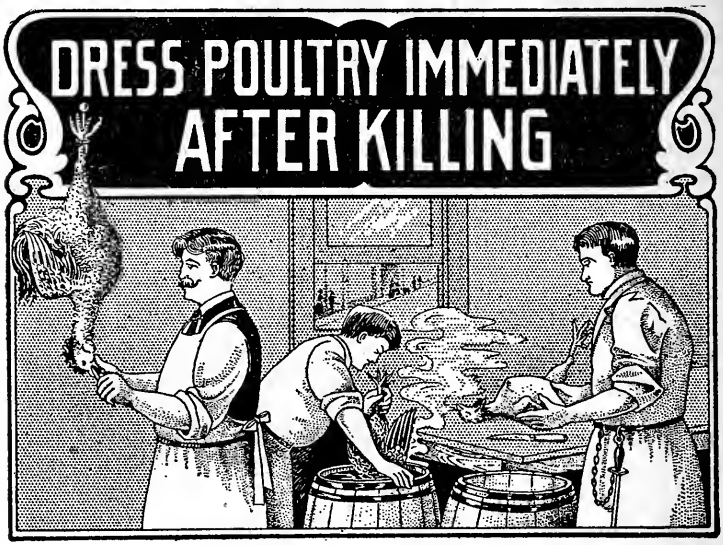
All butchers should put up home made pickles of all kinds and such relishes as horse-radish and sauer kraut. Dill pickles are very popular and they are always salable in the butcher shop. They may be made as follows: Select large pickles of as near an even size as possible and soak in water over night; then wash them thoroughly. Next, take a barrel and put a layer of dill about one inch thick on the bottom of it, upon which place the pickles three layers deep. Over these pickles place another layer of dill and repeat the layer of pickles as in the first instance. Continue this operation of the layer of dill and then pickles until the barrel is as full as desired, leaving sufficient space for the brine. The brine should be made of the best quality of salt, using 1 lb. to each gallon of water. Brine thus made will make the natural soft home-cured German dill pickles. After the brine has been placed over the pickles place them in a cooler and let them ripen for about four weeks. The ripening process may be quickened about two weeks by leaving the pickles in a room of moderate temperature. Some people prefer dill pickles hard and for such taste it is necessary to put a little alum in the brine. A piece about as big as an egg for a full barrel of pickles is the proper amount. Dissolve this in the brine. This will keep the pickles firm and hard. It will be found, however, that most tastes prefer the natural brine without the alum, as the soft pickle seems to have a more appetizing flavor. There is no appetizer more appreciated than the dill pickle and it comes nearer appealing to the general trade than most any relish that can be offered.



HOW TO DRESS POULTRY.

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The Butcher who will make a specialty of dressed poultry will make a hit with his customers and good profit on sales if he will be careful to get his Chickens dressed decently, and to educate his customers to pay prices that will be commensurate with the quality of the meat offered. Very often it is almost an impossibility for the consumer to secure sweet, untainted Poultry Meat. Much of this trouble is owing to the fact that large shippers kill the Chickens, dry pick them or scald them, and the food that remains in the intestines ferments and taints the meat, with the result that the Chicken, when cooked, has an abominable taste.

When a Butcher is so situated that he can dress his own Chickens, and he would be fully justified in making all preparations in that direction, he ought to open, draw and wash out thoroughly every chicken as fast as it is killed, just as he would wash out Hogs, Calves or Sheep. Chickens that have been nicely drawn and washed immediately upon killing are always sweet in flavor, and the Butcher who will take the pains to offer such goods and to acquaint his customers of their quality can not only establish a large trade

and a great reputation, but he can offer the public an article that is pure and sweet, and difficult to obtain. No doubt he could command the Chicken trade of any neighborhood by this means, down all competition, and obtain good prices for his Meat, as people would be willing to pay for the original weight of the chicken before drawing, and at the same time would be much better satisfied with what they get. If desired, the Butcher could weigh the chickens after they are dressed, tag and draw them, and then could say to his customers: "This Chicken weighed so much before it was drawn, but in order to retain the sweetness of the meat, we draw it as it ought to be drawn, wash it out, and sell it to you for just what it is worth." A Butcher's statement upon these points would not be doubted. Furthermore, the Butcher would not lose anything by this method, as Chickens shrink after they are dressed and kept two or three days before sold. The loss from this shrinkage is considerable. Therefore, the trouble and expense of drawing Chickens and handling them in the manner described would be fully repaid.

STICKY FLY PAPER.

Every Butcher can make his own Sticky Fly Paper with very little trouble. It is made as follows:

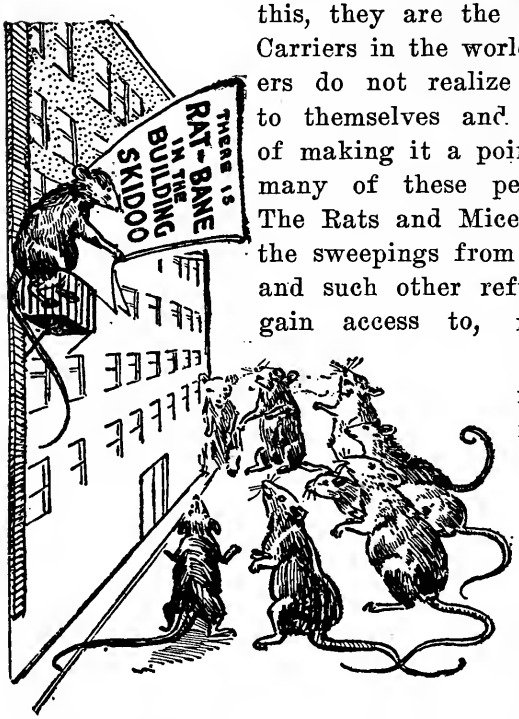
1 lb. Rosin.

3½ oz. Molasses.

3½ oz. Boiled Linseed Oil.

Boil the three together until they get thick enough and then spread on heavy Manilla paper. The proper and quickest way is to take a sheet of heavy Manilla paper and spread the mixture on half of the surface of it, then double the paper over; the mixture put on the half will be quite sufficient to coat the face of the other half that is doubled over on it. The cost of making this sticky fly paper is very small and in an hour any Butcher can make enough Sticky Fly Paper to last the entire summer.

RATS AND MICE.



Rats and Mice daily destroy many thousands of dollars' worth of merchandise and property. Besides this, they are the greatest Disease Carriers in the world. Many Butchers do not realize the importance to themselves and their neighbors of making it a point to destroy as many of these pests as possible. The Rats and Mice that feed upon the sweepings from Butchers' floors and such other refuse as they can gain access to, may have a very far-reaching influence in carrying diseases and spreading epidemics, besides the waste they cause and the destruction to buildings and other property. To kill out all the Rats and Mice which visit a Butcher Shop and not have them die in the house may involve a campaign covering several weeks, but it will more than repay the Butcher and the Community for making the effort.

By using our Rat-Bane (an advertisement of which will be found on page 288) they can be entirely cleared out of any vicinity. One beauty about using Rat-Bane is that they die out in the open and not in the walls, under floors or in their holes under houses.

Butchers will save much more by stopping the waste of these pests than the expense of getting rid of them.

KILLING ON THE FARM.

Very often butchers in the smaller towns find it convenient to slaughter live stock in the country where it is purchased. In order to meet such cases we submit the following directions for slaughtering cattle, hogs and sheep, and no doubt they will be found useful and suggestive.

It is absolutely necessary that only healthy animals shall be slaughtered for food. It is not so important that stock should be fat, although no one can expect the best results from lean animals, but as there is a demand for all grades of meat, condition is not so exacting as health.

In the case of injured animals, crushed ribs, broken limbs, etc., the flesh is not good for food unless the stock has been slaughtered immediately upon receiving the injuries.

AGE FOR KILLING.

It is a well known fact that the meat of old animals is tougher than that of young ones. The flesh of young animals frequently lacks flavor and is not solid. An old animal in proper condition and good health is preferable as food to a younger one in poorer condition.

Cattle if properly fed are fit for beef at 12 to 24 months, although the meat from these animals often lacks flavor, especially if they have not been well fed. The best meat is from aged steers 30 to 40 months old. A calf should not be slaughtered under four weeks and is not at its best until about eight weeks of age. There is a law in many States confiscating veal offered on the market under six weeks of age.

Pigs may be used after six weeks but the most profitable age at which to slaughter hogs is between eight months and one year.

Sheep may be used at from 3 to 4 months of age; but are at their best from eight to twelve months.

PREPARING FOR SLAUGHTER.

Experience dictates that an animal intended for slaughter should be kept from eating for twenty-four to thirty-six hours before killing. If kept on full feed the system is gorged and the blood, loaded with assimilated nutrients, is pumped to the extremities of the capillaries. It is impossible to thoroughly drain the blood from the veins when the animal is bled, and the result will be a reddish-colored, unattractive carcass. Again, food in the stomach decomposes very rapidly after the animal is slaughtered. Where the dressing is slow, as it must be on the farm, the gases generated from the stomach often flavor the meat. It is well to give water freely up to the time of slaughter as it aids in keeping the temperature normal and helps in cleaning out the system, resulting in a nicer colored carcass.

It is but natural that the condition of animals prior to slaughter should have a positive effect on the keeping qualities of the meat. There should be no excitement sufficient to raise the temperature of the body. Excitement creates fever, prevents proper drainage of the blood vessels, and, if intense, will cause souring of the meat very soon after dressing. No animal should be killed after a long drive or rapid run about the pasture. It is always better in such cases to permit the animal to rest over night rather than to risk spoiling the meat. The flesh of an animal that has been overheated and then killed is usually of a dark color and frequently develops a sour odor within a few hours after dressing. Bruises cause blood to settle in the affected portions of the body, often causing loss of a considerable part of the carcass. A 24-hour fast, ample water, careful handling and rest are necessary in order that the meat may be in the best condition for immediate use or curing.

KILLING AND DRESSING CATTLE.

The first step in killing is to secure the animal so that, in no emergency, it can escape. Use a rope one inch in diameter. Put a slip noose in one end with a knot just far enough from the noose to prevent choking when drawn tight, but it should at the same time allow the noose to draw tight enough so that there is no danger of escape, in the event of the rope becoming slack. If the animal has horns, pass the noose over the head, back of the ear and horn on the right side, but in front of the horn on the left side of the head. This operation leaves the full face of the animal bare and does not tighten on the throat. When a dehorned or polled animal is to be slaughtered it will of course be necessary to put the noose around the neck. Attach an ordinary pulley to a post or tree close to the ground, to the barn floor or sill, pass the rope through it and draw the animal's head down as close to the pulley as possible.

Fig. 2—Beef: Illustrating method of securing to stun. Intersection of dotted lines show place to strike.

Administer a heavy blow in the center of the forehead at a point where lines from the base of the horns to the eyes would cross. Shooting has the same effect as stunning and may be resorted to. Frequently where an animal can not be brought to the pulley it is necessary to shoot. In shooting use only a rifle of good caliber.

Bleed the animal immediately by sticking just in front of the breast bone as shown in Fig. 3. Stand in front of the animal with back toward the body after the manner of a horseshoer. Reaching down between the front feet, lay open the skin from breastbone toward the chin for a distance of 10 to 12 inches, using the ordinary skinning knife. Insert the knife

with the back against the breastbone and the tip pointing to the spinal column at the top of the shoulders, cutting just under the windpipe and about 5 to 6 inches in depth at the junction of the jugular vein near the collar bone; at this point if the vein is severed the blood will run out rapidly. If stuck too deep, the pleura will be punctured and blood will flow in the chest cavity, causing a bloody carcass. It requires practice to become expert in the sticking of beef. Not so much skill is required to simply cut the animal's throat back of the jaws but the time required for bleeding is very much longer and the bleeding less thorough.

SKINNING AND CUTTING.

Begin skinning at once while the carcass is lying on its side by splitting the skin through the face from the head to the nose as shown in Fig. 4. Skin the face back over the eyes on both sides and down over the cheeks, cutting around the base of the horns so as to leave the ears on the hide. Split the skin down the throat to meet the cut made in bleeding. Start the skin in slightly on the sides of the neck and down to the jaws. Now remove the head by cutting just back of the jaws toward the depression back of the head as shown in Fig. 5. The atlas joint will be found at this point and may be easily unjointed with the knife.

Fig. 3—Beef: Place to stick and manner of sticking.

At this point the carcass should be rolled on its back and held in position by a small, strong stick, say 18 inches long, with a sharp spike in both ends. Insert one end in the brisket and the other in the floor or ground. This will hold the carcass in position. Then split the skin over the back of the four legs from between the dew-claws to a point three or four inches above the knees. Skin around the shin and knee, unjointing the knee at the lowest joint as seen in Fig. 6 and skin clear down to the hoof.

The brisket and forearms should not be skinned until after the carcass is hung up. Now cut across the cord over the hind shin, splitting the skin from the dewclaws to the hock up over the rear part of the thigh to a point from four to six inches back of the cod or udder. Skin the hock and shin, removing the leg as shown in Fig. 7. In splitting the skin over the thigh turn the knife down flat with the edge upward to avoid the cutting of flesh. While the hind leg is stretched ahead it is skinned down over the rear of the lower thigh but do not skin the outside of the thigh until the hind-quarters are raised. After the legs are skinned split the skin of the carcass over the midline from the breast to the rectum.

Fig. 4—Beef: Skinning the face, illustrating manner of starting.

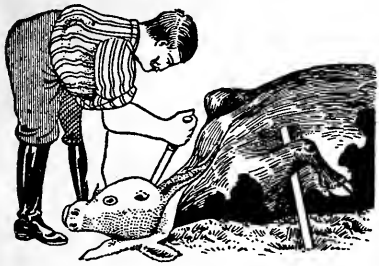


Fig. 5—Beef: Removing the head.

Now begin at the flanks and skin along the midline until the side is nicely started. With a sharp knife held flat against the surface have the hide stretched tightly and remove the skin down over the sides with steady down-strokes of the knife, as shown in Fig. 8. But it is necessary that the hide should be stretched tightly and without wrinkles. Care should be taken to leave a covering of muscles over the abdomen of the carcass as it keeps it better. In siding the beef, it is usual to go down nearly to the back bone,

Fig. 6—Beef: Showing manner of unjoining fore leg and skinning shank.

leaving the skin attached at thighs and shoulders; skin over the buttock and as far down on the rump as possible, always avoiding cutting the flesh or tearing the membrane over it. A coarse cloth and a pail of hot water should be at hand while skinning and blood spots wiped quickly from the surface, but the cloth should be nearly dry, as the less water used the better. Open the carcass at the belly and pull the small intestines out at one side. Use a saw or sharp ax in opening the brisket and pelvis. After raising the windpipe and belly and cutting loose the pleura and diaphragm along the lower part of the cavity, the carcass will be ready to raise.

Fig. 7—Beef: Unjointing the hind leg.

Fig. 9 shows the carcass ready for raising, and Fig. 11 shows the block and tackle rigging attached to the carcass about to be raised.

When the carcass is raised to a convenient height, skin the hide over the thigh, rump and hips. While in this position, it is well to loosen the rectum and small intestines and allow them to drop down over the paunch. The fat lining, the pelvis and the kidney fat should not be disturbed nor mutilated. The intestines may be separated from the liver to which they are attached by the use of a knife. The paunch is attached to the back at the left side and may be torn loose. Let it roll on the ground and cut off or draw off the

Fig. 8—Beef: "Siding down;" knife held flat against the tightly stretched skin.

gullet. The carcass at this point is shown in Fig. 11. Now raise the carcass a little higher and take out the liver, having first removed the gall bladder. Now remove the diaphragm, lungs, the heart, and finish skinning over the shoulders, forearms and neck, as shown in Fig. 12. Sponge all the dirt and blood off with a cloth, split the carcass in halves, using a saw, cleaver or sharp ax, wash out the inside of the chest cavity and wipe it dry.

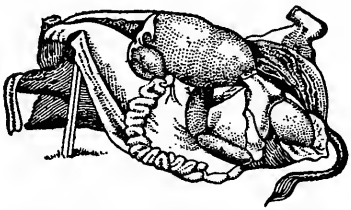


Fig. 9—Beef: Ready to raise: Breast, forearms and neck, left covered to protect the meat until the carcass is raised.

Trim off all bloody veins and scraggy pieces of the neck and leave the beef to cool before quartering.

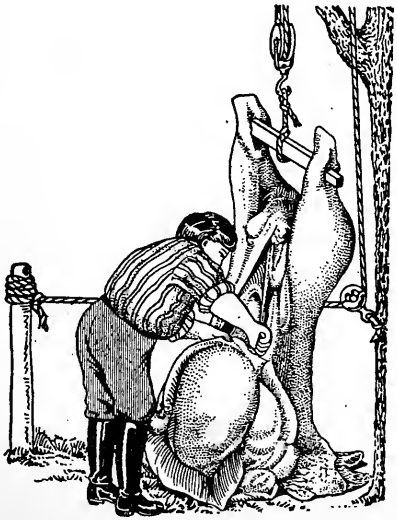
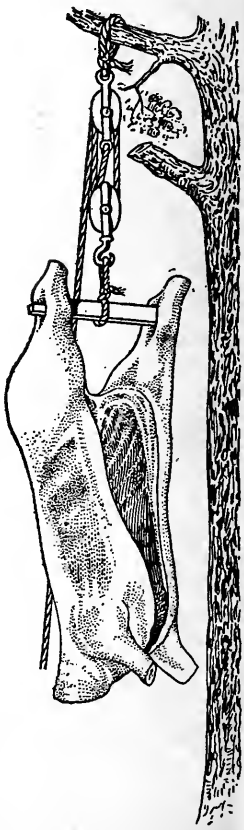


Fig. 11—Beef: Removing paunch and intestines.

Fig. 12—Beef: Skinning shoulders and forearms.



13.—Beef raised out of the way of animals to cool.

Fig. 13 shows the finished carcass hanging high up and cooling.

KILLING AND DRESSING MUTTON.

If the sheep is an old one, it should be stunned. If a young one, dislocating the neck after cutting the throat serves the same purpose. This is accomplished by placing one hand on top of the head, the other under the chin, and twisting sharply upward. Lay the sheep on its side on a platform, with its head hanging over the end. Grasp the chin in the left hand and stick the knife through the neck back of the jaw, turning the cutting edge of the knife toward the spinal column and cut the flesh to the bone. By so doing it is impossible to cut the windpipe. (See Fig. 14.)

Fig. 14—Manner of Sticking a Sheep.

Split the skin over the back of the front leg from the dewclaws a little above the knee. (See Fig. 15.) Open the skin over the windpipe from breast to chin, starting in slightly on the sides of the neck. Split the skin over the back of the hind leg through the middle line and skin the buttock. Raise the skin over the udder or cod and flanks. Skin around the hocks and down to the hoofs, cutting off the feet at the toe joints. Run the knife between the cord and bone on back of the chin and tie the legs together just above the pastern joint. Do not skin the legs above the hock until the carcass is hung up.

Fig 15.—"Legging out" a sheep.

Hang the sheep up by the hind legs, split the skin over the middle line; start at the brisket and "fist off" the skin. This is done by grasping the edge of the pelt firmly in one hand, pulling it up tight and working the other with the fist closed between the pelt and the body, over the fore-quarters downward and upward and backward over the hind-quarters and legs. It is unwise to work down on the skin over the hind legs, as it would rupture the membrane. The wool should always be held away from the flesh as a matter of cleanliness, and the skin on the legs should be pulled away from the carcass rather than toward it. When the pelt has been loosened over sides and back, it should be stripped down over the neck and cut off close to the ears. Remove the head without skinning by cutting through the atlas joint.

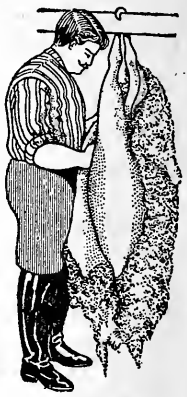


Fig. 16—Fisting off the Pelt.

GUTTING.

Remove the entrails by cutting around the rectum and allowing it to drop down inside, but do not split the pelvis. Open down the belly line from cod or udder to breast bone; take out the paunch and intestines, leaving the liver attached to the diaphragm. It is not best to split the breast. Reach up in the pelvis and pull out the bladder. Wipe all blood and dirt from the carcass with a coarse cloth wrung dry from hot water. Double up the front legs and slip the little cord found by cutting into the fleshy part of the forearms into the ankle joints.

Fig 17.—Removing the intestines of sheep.

KILLING AND DRESSING HOGS.

A good sticking knife, hog hook, scrapers, a barrel or a trough for scalding, and a convenient place for working are the important necessities. Set the barrel at the proper slant with the open end against a table or platform of the proper height, with the bottom securely fastened; a strong tackle built for the purpose is desirable, but not necessary. Hogs should not be excited or heated, and in catching and throwing them bruising must be avoided. However, it is not necessary to stun hogs before sticking them. At slaughter houses they are usually hung up by one hind leg. If there is no hoisting appliances, lay the hog on its back and hold it there until stuck. Two men can handle a hog if they will but work with intelligence. By reaching under the animal, one at the fore leg and the other at the hind leg, they can turn a heavy hog on its back easily. One man, standing astride the body, with his feet close against the side and holding its front feet, can control it while the other does the sticking.

Fig. 18.—Manner of holding and sticking a hog.

Fig. 19.—Scalding a hog. Note arrangement.

The knife should be eight inches long, straight bladed and narrow, and stuck into the hog's throat just in front of the breast bone, the point directed toward the root of the tail and held in line with the back bone. This is necessary to prevent cutting between the ribs and the shoulders, which would cause the blood to settle there with waste in trimming of the shoulder. When the knife has been stuck in six or eight inches, according to the size of the hog, turn the knife quickly to one side and withdraw it. The arteries that are to be cut run close together just inside of the breast bone and both are cut when the knife is turned, providing the edges are sharp at the point.

The water for scalding when heated in the house should be boiling when removed from the stove. If put into a cold barrel it will be about the right temperature when the hog is ready for scalding. During the scalding process the water should be about 185 to 195 degrees, if the scalding tub holds only enough water to scald one hog. Water at 150 degrees will scald a hog, but, of course, more time is required. In large packing houses where a large tub is used and steam is continually blowing into the water, the water is kept at 150 degrees. Too hot water is likely to cause more trouble than too cold, and for this reason it is always best to have a thermometer at hand. Of course, the temperature may be reduced by putting in a little cold water. A hog should not be scalded before it is dead or the blood in the small blood vessels near the surface of the skin will cook and give a reddish tinge to the carcass.

To make the hair easy to remove and to cleanse the skin of the hog and free it from all the greasy filth which forms a scurf on the skin of all hogs, our Hog-Scald should always be used. Hogs scalded with the aid of Hog-Scald do not require so much heat to loosen the hair, it requires much less labor to clean them, and

the dressed hogs will look much nicer and the rinds will cure and smoke nicer than when it is not used. No Farmer or Butcher will dress his hogs without Hog-Scald after giving it a trial. For description and price list on Hog-Scald, see page 278.

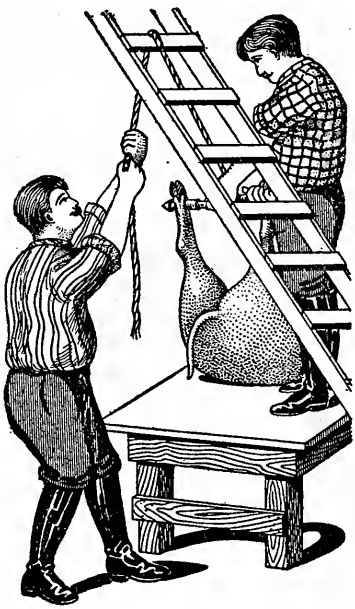


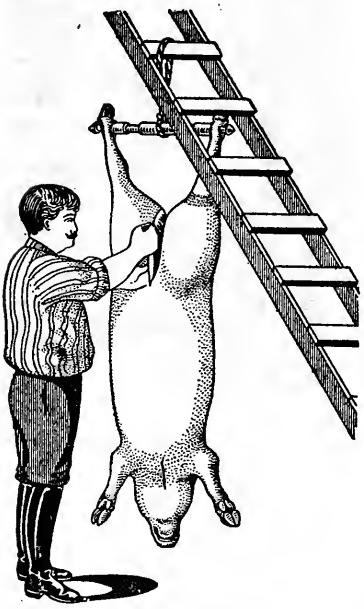
Fig. 20.—A convenient way of hanging up a hog.

While being scalded the carcass should be kept moving constantly to avoid cooking the skin. While scalding, the hog should occasionally be drawn out of the water for air, when the hair may be tried. When both hair and scurf slip easily from the skin, scalding is completed. Remove the carcass from the water and begin scraping. The head and feet should be cleaned first, as they do not clean easily when cold. Use a "candlestick" scraper on the head. Use the hands and a knife if you haven't this tool. The feet and legs are easily cleaned by grasping them firmly with the hands and twisting them around and back; pull the little bristles of the body by hand and remove the scurf and fine hair with the scraper, long corn knife or other tool. Wash the entire carcass with hot water and shave it with a sharp knife. Insert a stick under the gambrel cords and hang up the hog.

Wash down with hot water, shave patches and rinse with cold water. Occasionally the hog is too large to scald in a barrel. Cover it thickly with blankets or sacks containing a little bran, pour hot water over it and the hair will be readily loosened.

GUTTING HOGS.

Split the hog between the hind legs, separating the bones with a knife. Run the knife down over the belly line, guiding it with the right hand and shielding the point with the fingers of the left hand and thus avoid the danger of cutting the intestines. Split the breast-bone with a knife or an ax and cut down through the sticking place to the chin. Cut around the rectum and pull down until the kidneys are reached, using a knife whenever necessary to sever the cords attached to the back. Do not disturb the kidneys or the fat covering them, excepting in warm weather, when the leaf may be removed to allow quicker and more thorough cooling. Remove the paunch and the intestines. The gall bladder lies in plain sight on the liver, and it lies attached to the diaphragm and hypatic vein. It should be stripped off after starting the upper end with a knife. Avoid spilling the contents on the meat. Insert the fingers under the liver and strip it out. Cut across the artery, running down the backbone, and cut around the diaphragm, removing them with the pluck, that is, heart, lungs, liver and gullet. Open the jaw and insert a small block to allow free drainage. Wash out all blood with cold water, and dry with a coarse cloth. In hot weather the backbone should be split to facilitate cooling. The fat should be removed from the intestines before they get cold. It is strong in flavor and should not be mixed with the leaf lard in rendering.



Gutting the Hog

CLEANING CASINGS.

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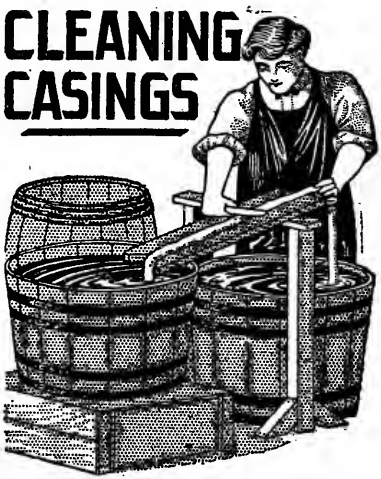

Those who undertake to clean casings have great trouble in getting them white and many resort to lime and other methods for both bleaching them and freeing them of fat. Notwithstanding all such efforts, the casings remain dark and unattractive. The reason for much of this difficulty lies in the fact that the casings are not properly washed and cleaned in the first operation. Casings should be washed thoroughly in three different changes of water. The fat should then be scraped off from the outside. Water must also be run through the casings and they should be turned inside out so that they may become thoroughly washed and cleaned. After casings have been perfectly washed and scraped in this manner, they should be dry-salted by packing them in a liberal quantity of salt. Casings thus cured will remain sweet and white.

HANDLING HIDES.

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The proper handling of the hides of slaughtered animals, so as to obtain the best possible prices for them and avoiding excessive shrinkage before they are marketed, is a very important matter and should have the Butcher's careful attention.

In the first place, it should be borne in mind that it is an easy matter to badly damage the hide of an animal before killing by prodding it with a pole. This of course should always be avoided.

The killing floor should be kept as clean as possible. If there is blood on the floor and this gets on the hair and remains there, when the hides are stacked up this

blood comes in contact with the fleshy side of the hide next to it and will make a spot which gives the hide a very bad appearance. By keeping the hides entirely free from blood, they make a better appearance and bring a better price.

The greatest care should be given to the removal of the hide, so they are not scored, as this greatly reduces the value of the hides to the tanner. A good, careful skinner is worth several dollars a week more to the Butcher who kills many animals than a skinner who is careless in his work. (The hide should be so nicely removed from the animal that when it comes to the tanner it should look like it had been planed from the animal, it should be so so free from cuts or scores.)

PROPER STORAGE OF HIDES.

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This is a point of very great importance. If many hides are kept on hand for any length of time before shipment, the difference in shrinkage between hides which are properly kept and those which are not so stored is very great. The careful storing and handling of hides will always repay the time and trouble necessary, not only in the weight of the hides, but in the condition in which they are marketed.

Hides should be kept in as cool a room as possible and all windows and doors should be kept closed, so as to have no circulation of air.

SALT TO USE IN SALTING HIDES.

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The best salt to use for this purpose is Crushed Rock Salt. Large lumps of salt are objectionable, on account of leaving indentations in the hides where they are pressed together, which injures their appearance in the eyes of the buyer.

One part of Fine Salt to three parts of Crushed Rock Salt makes a fine mixture for salting hides, as the fine salt quickly dissolves and makes a moisture on the hide, which the hide absorbs.

When re-using old salt for salting hides, always add about one-third of new salt to it, as this gives much better results. About one-third of the salt used is consumed in salting hides, so by adding one-third addi-

tional of fresh salt each time, the supply of salt is kept the same. Always keep the salt as clean as possible. If there is much dirt or manure in it these will discolor the hides and they will not make as good a showing to the buyer.

QUANTITY OF SALT TO USE ON HIDES.

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In large Packing Houses about 35 lbs. of salt is used for each hide. The Packers find that by using this quantity they get better results than if a smaller quantity is used. Very few Butchers in the country use as much salt as this on their hides, but they would find it greatly to their advantage to use about 100 lbs. of salt to every three hides, and if the proper quantity of salt is used, as described in the foregoing, it can be used over and over again with a loss of about one-third for each time used. It is much better for the Butcher to invest more money in salt and give the hides a proper amount, as he will thus save on the excessive shrinkage of the hides, which would amount to more than the cost of the salt.

HOW TO STACK HIDES WHEN SALTING.

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One of the most important features in salting hides is the way they are stacked when salted. The hides must be so piled that they are perfectly level and the salt must be distributed over every part of the hide. The flesh side should be up, and the salt should be rubbed over them evenly. The hides can be piled about two feet high. The legs of the hide should be kept straight and flat, so the salt gets into all crevices. The edges of the stack of hides should be kept a trifle higher all around than the center of the stack, so the natural moisture that comes out of the hide and the dry salt will remain on them. If the hides are salted on a slanting floor, or if the hides are piled up carelessly so the hides lie slanting, the brine composed of moisture of the green hide and the salt will run off and then the percentage of loss from shrinkage will be large.

HOW LONG TO CURE HIDES.

Hides should lie in the pack and salt for 25 to 30 days, so as to be fully cured and ready for shipment.

TRIMMING OF GREEN HIDES.

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Before the hides are salted the switches should be cut off of the tail and all loose ends of the hide should be cut off. The butt of the ears should also be split; if the hides go into the pack without attention to this point, it makes the pack very uneven on account of the thickness of the ear, and the salt does not have a chance to properly penetrate the ears, and they are liable to spoil. Loose pieces of meat that are carelessly left on the hides and all excessive fat should be trimmed off. Hides must not be salted until five hours or longer after the animal is killed, and they must not be piled closely, as this would prevent the animal heat from escaping. If hides are salted with the animal heat in them, very often the hair will slip, which will make No. 2 hides.

SALTING SWITCHES.

Switches should be spread out on the floor so they will thoroughly cool off. After they are thoroughly cool, they can be piled into a heap and salt applied so they are entirely covered. The more salt put over them the better, as they spoil very easily.

TANNING SKINS.

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Butchers can easily tan the skins of Sheep, Goats, Cattle and Calves with Tanaline, and they can often pick up fine skins of wild animals, which can also be easily tanned. By tanning the fancy skins that the Butcher frequently can get, he can sell them for

three or four times as much as he would realize when sold to the Hide Buyer. All Butchers who kill their own cattle should avail themselves of this means of adding to their profit, as tanning such skins with Tanaline is very simple and requires but little time.

Tanaline is a reliable preparation for tanning skins for Rugs, Robes, Cloaks, Overcoats, etc. It thoroughly tans the skins and leaves them sweet and pliable. It is simple and easy to use and enables anyone to tan the skins of all kinds of animals and make beautiful and useful furs at small expense.

DIRECTIONS.

First:—Thoroughly wash the skin and remove any adhering flesh from its inner surface.

Second:—Thoroughly clean the hair, wool or fur, with warm water and soap, preferably soft soap, and rinse well with lukewarm water.

Third:—Place the contents of the package of Tanaline in an earthenware, enamel, glass or wooden dish and add sufficient boiling hot water to make a thick paste, stirring constantly with a wooden paddle as the hot water is added.

Fourth:—Lay the pelt on the floor or table, fleshy side up, and spread the mush, which has been allowed to cool enough not to scald the skin, evenly over the fleshy side of the pelt.

Fifth.—Fold the pelt lengthwise, fleshy side in, and lay the skin in an airy and shady place, to remain there for two weeks, then shake out and remove the Tanaline Paste from the surface and wash with lukewarm water and dry. For very heavy skins, a second application may be necessary.

Sixth:—After removing the Tanaline Paste and cleansing the skin, it should be stretched and worked with the hands or over a smooth beam and scraped on the fleshy side with a dull knife. This will make the skin soft and pliable, so it can be utilized for any purpose.

POLISHING HORNS.

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If the horns are rough, first take a file and file through the rough horn, down to the solid horn, and file the horn into proper shape, smoothing the tip and shaping the large end to suit the fancy. After they have been filed, take sand paper and rub the horn with the sand paper until it is nice and smooth, then finish the rubbing with very fine sand paper, so as to take out all the scratches. After it has been sand papered, take a piece of glass and scrape it until very smooth. Polish by rubbing with powdered rotten stone and machine oil. The polishing must be done with the palm of the hand, and the horn should be rubbed until beautifully polished.

WHY DRIED BEEF DOES NOT THOROUGHLY DRY.

Query.—R. B. writes: "We are having trouble with our Dried Beef. It doesn't seem to dry out. We have it hanging in the cooler."

Ans.—Your beef doesn't dry out because you keep it in the cooler. In order to dry beef, it is necessary to hang it in a dry room. You can hang it right out in the market for that matter and there it will dry rapidly, in fact, it will dry too quickly so that it will become hard. Drief Beef will dry some in the smoke house, but not sufficiently. We send you a copy of our book, "Secrets of Meat Curing and Sausage Making," which will give you full particulars in reference to this entire subject.

WHAT IS THE DIFFERENCE BETWEEN POTATO FLOUR AND BULL-MEAT-BRAND FLOUR?

Query.—C. Pk. Co.: Will you kindly write us what is the difference between your Bull-Meat Flour and Potato Flour, as we have received several circulars from you on Bull-Meat Flour, and have always been using potato flour heretofore, and if you will explain to us the difference and if your Bull-Meat Flour is better for us, we will be glad to use it.

Ans.—The difference between Bull-Meat-Brand Flour and Potato Flour is this, potato flour is a starch made from potatoes and the absorbing properties of a pound of potato flour or potato starch are much less than you would imagine. If you will take a gallon of water and put into this water one pound of potato flour and let it stand for one hour all of the Potato Flour will have settled to the bottom and you can pour off the gallon of water and then weigh the pound of potato flour and you will be surprised that it will weigh less than two pounds, it will take up less than one pound of water. Also make a test by putting one pound of Bull-Meat-Brand Flour in a gallon of water and you will find that the pound of Bull-Meat-Brand Flour will almost have absorbed the entire gallon of water. You can easily see by making this test the difference in the action of the flours when used in different kind of sausage. When potato flour is used in Pork Sausage it virtually does not absorb any water at all, but when Bull-Meat-Brand Flour is used in pork sausage it not only absorbs the water but also absorbs the grease and then when the sausage is fried it looks entirely different and tastes entirely different than sausage made with potato flour. Bull-Meat-Brand Flour absorbs all the fat and juice in the meat and holds it in the meat and it does not fry out. Potato Flour does not hold the fat, but lets the fat fry out, the sausage will be dry and brittle. If you will try the Bull-Meat-Brand Flour and make a test you will never use potato flour again.

CAUSE OF BOLOGNA DRAWING WATER AND BEING SHORT GRAINED.

Query.—J. L. B. writes: "Will you kindly answer the following questions: First, What is the cause of bologna drawing water while being cooked? Second, What is the cause of short grain bologna?"

Ans.—We do not exactly understand your first question and cannot tell whether you mean that moisture draws out of the Bologna or whether water draws into the Bologna. As a rule, when the Bologna is cooked, especially in water that is too hot, it will shrink very much, become dry and crumble and break up. This effectually answers your second question also. The trouble you are experiencing is due to your method of making Bologna, which is not exactly right. In the first place good Bologna cannot be made without the use of a binder like our Bull-Meat-Brand Flour. A binder and absorbent of this kind causes the meat to hold together. It also makes the juices of the meat remain in the Bologna. When Bologna does not properly bind, it shrinks up and gets watery inside. This is owing to the fact that the meat does not hold together properly and the water instead of being absorbed right into the meat as it should be, gets between the small particles of meat and separates inside. This is owing to the fact that the meat does not hold together properly and the water, instead of being absorbed right into the meat as it should be, gets between the small particles of meat and separates them. If you will use our Bull-Meat-Brand Flour and follow the methods set forth in our book, "Secrets of Meat Curing and Sausage Making," you will never have any trouble from your Bologna breaking up or getting crumbly or watery as you call it.

CAUSE OF LARD FOAMING WHEN USING LARD PURIFIER.

Query.—W. & Son write: "Will you kindly tell us what, in your opinion, accounts for our lard foaming after treating it with your B. Heller & Co.'s Lard Purifier when placed in the frying pan? Our customers are complaining about this feature, although the lard is nice and satisfies them in every other respect."

Ans.—The complaint which your customers make concerning the foaming and spluttering of the lard is in all probability due to the fact that all the water was not separated from the lard after treating the lard.

Whenever lard is treated with our Lard Purifier, it must be heated hot enough and allowed to stand long enough so that all the water separates and settles out to the bottom. If this is always done, the lard will not splutter when used in the frying pan.

IMITATION BULL-MEAT-BRAND FLOUR.

Query.—G. U. writes: "I find that I have been imposed upon by a salesman with a binder which is claimed to be Bull-Meat Flour. Owing to the fact that I have not been able to get satisfactory results from the use of it, I have examined the package closely, and find that the labels are not the same as yours. I enclose a rough drawing of what this label is like and would like to know if the goods are of your manufacture. It doesn't act like your Bull-Meat Flour and I have had very poor success with it; in fact, so very poor that I have sent it back to the jobbers and told them that I could not use it."

Ans.—You most certainly received an imitation of Bull-Meat-Brand Flour. The very fact that the preparation you received failed to give satisfaction was, in itself, sufficient to convince you that you had been imposed upon, as Bull-Meat-Brand Flour always produces the most excellent results. Your idea of examining the label is the proper one. There is no other binder on the market that possesses as many virtues as Bull-Meat-Brand Flour and users of this product cannot be otherwise than disappointed when they receive an imitation preparation. Bull-Meat-Brand Flour is not only a binder and absorbent, but one of the most Delicious Articles it is possible to use in Sausage making. It has its Flavoring Qualities as well as its tendency to Bind and Blend the Juices of the Meat, thus absorbing all the grease that enables Bull-Meat-Brand Flour to give sausage such a Delicious and Superior Flavor. When purchasing our goods in the future, we would ask you to kindly examine them closely upon their receipt to see that you are receiving the Genuine and nothing but the Genuine. In this way it will not be necessary for you to spoil a lot of Sausage in order to find out that you have been imposed upon by irresponsible imitators who try to pirate our goods. Never use any goods shipped you until you have examined them closely to see that the name of B. Heller & Co. and no other is upon the label.

B. HELLER & CO.

HOW TO CONSTRUCT A MODERN SMOKE HOUSE.

Query.—The S. P. Co. asks: "Would you kindly tell us, and we will gladly pay you for the information, how to construct a modern, up-to-date smokehouse?"

Ans.—We will be very glad indeed to tell you all about this subject without charging you any fee. We are always glad to tell customers or prospective customers how they can profitably conduct their business and make money. As you are located in California, where the weather is always warm, the building of a smoke house becomes simple, because the smoke house will not sweat like it does in a climate where the weather gets cold in winter. Here in the Middle West, or farther East, it is more difficult to get a good color on meats smoked in a smoke house in winter. One of the principal points to be considered in laying out your plans is to get the proper height, and the higher you build your house and the less floor space it occupies, the better will be your results. An 8x10 or an 8x12 foot house gives the best results. In this you could put an arch about nine or ten feet from the ground, and under the arch smoke your fresh sausage and above it smoke the meat. In this way the heat and smoke used for the sausage would also be utilized for smoking the bacon and hams and none would be wasted. If you build the way we have indicated be sure and put ventilators right above the arch so that cold air can be let into the smoke house during the real hot weather. If your fire gets too hot, you can feed cold air to the interior chamber, and if your smoke house is tall you can create a good draught and will soon get up a circulation which will cool the air so that the meat will not shrink too much. A smoke house built for simply two tiers of meat, that is, two rows, is better than one built wider. The walls of your smoke house can be built either of brick or wood, whichever you prefer, brick being the safer of the two. If you do not intend to smoke fresh sausage but only bacon and hams, it is unnecessary to put in an arch. In that case simply construct some iron bars about eight feet above the fire and on top of these put a heavy iron screen, so in case any hams should fall that they do not fall into the fire. Of course, you know that many smoke houses catch on fire and burn up, due to not having an iron screen above the fire and by meat falling directly into the fire.

FILTERING LARD THROUGH LAKE GRAVEL.

Query.—A. B. writes: "Let me ask you to send me your book about meat curing and sausage making. It surely must be good, as everything you turn out is excellent. I have not been getting lard white and I tried many different ways until I heard about Fuller's Earth. This gave me a point to study over and finally the thought occurred to me why not use lake gravel. I commenced to use enough lake gravel to cover the bottom of the kettle and the result turned out wonderful. The gravel acts the same as if the lard had been tried out in an earthen kettle. I have no objections to letting my fellow butchers know of my successful experiment."

Ans.—Your method of rendering lard is certainly original. We doubt whether anyone has ever made such an effort before. As you state you have obtained excellent results with this method, we will take great pleasure in publishing it to give our readers the benefit of your experiment. The explanation of the result, no doubt, lies in the fact that by covering the bottom of your kettle with gravel you create a larger heating surface. The gravel becomes hot and of course that adds to the heat area of the kettle. Owing to this fact, it is not necessary to heat the lard at such a high temperature and it, therefore, being possible to render the lard at a lower temperature, the lard of course will not turn dark or become scorched. As no doubt you are aware that most of the dark lard is caused by intense heat while rendering, you may have discovered a way to avoid much of this difficulty, and the success which has attended your efforts seems to prove that you have. We presume you also draw the lard off through the bottom of the kettle, letting it filter through the gravel.

CORNED BEEF PRESSES—UTILIZING BONES.

Query.—H. G. W. writes: Will you quote me a price on corned beef presses, also let me know what I can do with bones after trimming to utilize them for profit?

Ans.—We do not handle butcher supplies, but manufacture preparations for butchers, packers and sausage makers. About the only profitable disposition you can make of bones is to grind them, if green, for chicken feed and sell them to people having chickens. If the bones have been cooked, they are good for fertilizing purposes, but should also be ground.

WRONG WAY TO COOK BOLOGNA SAUSAGE.

Query.—W. H. H. writes: Why is my bologna watery when cooked; the water runs out of them and the bologna shrivels up when I stick them?

Ans.—Your Bologna is watery because of improper boiling, and because a good absorbent is always needed to give Bologna the proper consistency. Without an absorbent the juices leave the meat and thus destroy the flavor, but with an absorbent the juices are retained in the cells of the meat and a rich, juicy flavor is the result. The nutritive qualities of the Bologna are thus greatly increased, it is more digestible and appetizing, more palatable and wholesome in every way. For this purpose, we advise that you make use of our Bull-Meat-Brand Flour, as it is thoroughly absorbed through the meat and blends with it like fat, thus retaining the full value and strength of the juices of the meat and preventing it from becoming lumpy or watery. If you will follow our directions for boiling Bologna, you will never have trouble in any way.

ICE VS. ICE MACHINE IN SMALL PLANTS.

Query.—F. S. writes: "I would like to know if an ice machine can be had small enough for a retail meat market and would it be profitable to take the place of an ice box? If you can do so, please give me this information and where I can get the ice machine. Ice here for a summer's use will cost about $75."

Ans.—You state that the cost of ice for the summer season in your market would be about $75.00; therefore, it will not pay you to put in an ice machine, as the cost of operating such a machine for an ice-box would be a great deal more than $75.00 for the season. For instance, if you could obtain electric power or a gas engine for operating the ice machine, you could figure on using at least $7.50 to $10.00 a month for power alone. In addition to this, you would have the expense of repairs and the wear and tear on the machinery, also the cost of ammonia and the interest on your investment. For a small plant, it is always cheaper to use ice for an ice-box, when it is possible to secure the ice at a reasonable figure.

ADVICE TO A PACKER WHO WAS DECEIVED.

N. & W. complain that a firm to whom they gave an order for 25 pounds of Freeze-Em Pickle and a barrel of Bull-Meat Flour sent them 25 pounds of an inferior substitute and a barrel of flour which was an imitation of Bull-Meat Flour. The firm states that they did not know very much about how the label of Freeze-Em Pickle looked and, therefore, did not notice the fraud until after they had used some of the imitation. They ask what they should do about it.

Ans.—Return the goods to your jobber, even though you have used half of them, inform him that you will not pay for the goods on the ground that you did not order them, but had ordered B. Heller & Co.'s goods, and that you will in future buy your goods from such firms as will send you what you want and order. This is a simple remedy for the trouble which you have.

ADVANTAGES OF STEAM-JACKET KETTLE IN RENDERING LARD.

Query.—C. W. F. asks: Is there any advantage in rendering lard in a steam-jacket kettle?

Ans.—There is. Both a caldron and a steam-jacket kettle work well. The best lard is made in one or the other. A steam tank in which the fat is put, and the steam turned right into it, will not produce as good lard as either the caldron or the steam-jacket kettle. The steam mixes right with the lard and the latter therefore contains a large amount of moisture and the lard does not keep well. Another disadvantage is that water used in the boiler is not always pure. If the boiler is not cleaned once a week the water will have a bad smell. Steam made from this water and turned into lard can not be expected to improve its flavor, even though it should not actually harm it. Those who kill large numbers of hogs usually have a steam tank for making steam rendered lard and a steam-jacket kettle for making their finer brands of kettle rendered lard.

B. HELLER & CO.

SEASONING FOR SAUSAGES.

Query.—T. U.: Will you please send me a copy of your book, "Secrets of Meat Curing and Sausage Making." I have always used the following seasonings in my sausage: Pepper, summer savory and sage, and would like to know if you can recommend anything to me which will give the sausage a better flavor than these spices will. Any information you can give me in the seasoning of sausage will be very much appreciated.

Ans.—The Seasonings which you have been using are being used by a good many Sausage Makers, but a real fine flavored Sausage cannot be made with them. If you wish to increase your Sausage trade right along, and want to make Sausage that your trade will relish and enjoy, you must use the very finest Seasonings obtainable, as the Seasoning really is the life of the Sausage. We are manufacturing the Zanzibar Brand Sausage Seasonings, which we make for all kinds of Sausage. These Seasonings are made after a secret formula which has been in our family for a good many years. The flavor that these Seasonings impart to the Sausage is something very fine; it must be tasted to be appreciated, as we cannot describe in a letter what the flavor really is. It is a peculiar combination which everyone likes and it is something that will soon increase your Sausage trade. Zanzibar Brand Sausage Seasonings are manufactured from the very finest Spices obtainable and we guarantee them to be absolutely free from any adulteration. We are sending you our circular and price list and would be pleased to receive your order for any quantity that you may desire, and we will say in advance that when you once use them you will never again want to make Sausage without these Seasonings.

SOLE MANUFACTURERS OF ZANZIBAR CARBON.

Query.—C. & K. write: "Are you the sole manufacturers of Zanzibar Carbon?"

Ans.—Yes, and we were the first to put a preparation of this kind upon the market.

QUICKEST WAY TO CURE MEATS.

Query.—W. & B. write: Our capacity for curing meats is limited for the want of room. Can you give us a formula or a recipe that will give a good cure in the shortest possible time? We would like something that is reliable.

Ans.—Our Book, "Secrets of Meat Curing and Sausage Making," will give you all the information in reference to curing meats which you may desire. The curing period can be greatly shortened by pumping the meat. It will also give you a better article. Our book, which is mailed to anyone requesting it, free of charge, will give you full directions for pumping, and also the formula for making the pumping brine. By following the instructions which this book contains, you will be able to turn out the finest kind of mild cured and sweet pickled meats, which will have a delicious flavor and a beautiful color. It will be necessary, however, for you to fully carry out our directions in reference to chilling meats and overhauling them, also the temperature to be maintained during the curing period.

DIFFERENCE BETWEEN FREEZE-EM AND FREEZE-EM-PICKLE.

Query.—L. B.: We have been using some of your goods and notice that you speak of Freeze-Em-Pickle for curing meats. Is this product the same as Freeze-Em? We have been getting our goods from our jobbers, and in their catalogue they also speak of Freeze-Em-Pickle. We would like one of your books on the secrets of meat curing and methods of smoking and curing, as we are young in the curing of meats yet and would like all the information possible.

Ans.—Your letter received and we are pleased to note that you have been using some of our goods and find them very satisfactory. You say you have read of our **Freeze-Em** and also our **Freeze-Em-Pickle**, and you would like to know whether they are both the same. They are not the same. Before the various pure food laws went into effect, we sold **Freeze-Em** as a preservative, also as a disinfectant. As so many of the pure food laws objected to the use of **Freeze-Em**, we discontinued selling **Freeze-Em** as a preservative, and now sell and recommend it for disinfecting purposes only.

Freeze-Em-Pickle is an entirely different preparation. This was placed on the market with a special view to supply the butcher with a preparation that will comply with all food regulations under all food laws. **Freeze-Em-Pickle** is to be used for curing all kinds of meat, such as hams, bacon, corned beef, bologna trimmings, pork sausage trimmings, and meats of all kinds, and it is also excellent for use in chopped beef, to keep it in a fresh condition.

DIFFICULTIES WITH CURING BRINE AND HOW TO OVERCOME THEM.

Query.—W. S. & Co.: We are so situated that we have to boil all the water that we use in our brine. After boiling it we run it into a cooling tank and let it cool. We have made some experiments with your Freeze-Em Pickle and like it to cure very well, and have decided to adopt its use in the curing of all of our meats. Now, what we want to know is, can we dissolve the Freeze-Em Pickle in the boiling hot water and then cool it and run it through coils the same as we do now with the water? Would the heat affect the Freeze-Em Pickle? Our vats when full hold 6,900 lbs. of medium sized hams. According to the size of the kettle and the amount of water to boil at one time, it would require 58 pounds of Freeze-Em Pickle. What we want to do is this: we do not want to weigh the Freeze-Em Pickle for each vat, but simply want to make a large quantity of brine and then run the prepared brine on to our hams. We have been using saltpetre and molasses for our brine and we are having trouble with it getting ropy and stringy. Will syrup answer the same as molasses or sugar, and is New Orleans molasses the best, or should granulated sugar be used entirely? Kindly let us know what you consider the best for hams.

Ans.—First of all, we advise that after the water is boiled, that it is allowed to settle and precipitate so that all the solids will settle to the bottom of the settling tank. It should settle at least 24 hours before the solids will have separated and gone to the bottom. Then the water should be drawn off, but not from the bottom of the tank, but at least a foot from the bottom. The water that will come off from above will be nice and clear. This water should then be run into another tank, called the mixing tank, in which the sugar, salt and **Freeze-Em-Pickle** should be dissolved;

this will make the stock brine which can be run down into the cellar over cooling pipes, so as to chill it properly before it is put on the meat. The reason the brine that you are making becomes ropy is that you are using adulterated sugar. The sugar that you are using or the syrup you are using contains glucose or beet sugar. If you will use absolutely pure cane sugar or absolutely pure syrup made from cane you will have no trouble from ropy brine. We strongly advise the use of nothing but absolutely pure cane sugar. We find that it gives the best results. It costs a little more than the unrefined product but you get less vegetable substance in your brine, and the brine will therefore keep much longer. The brine in which hams have been cured can be used a second time for curing breakfast bacon, and the breakfast bacon will be even better than if put into fresh brine. As your vats are large, the meat will pack very tight on the bottom, and we wish to caution you to be sure and overhaul your meat promptly five days after it is packed, and continue overhauling as per directions in our book on curing meats and making sausage. If you will follow these directions you will not have any ropy brine or any spoiled meat, but all your meat will come out uniform and will have the proper flavor.

TOUGH AND SALTY CORNED BEEF.

Query.—E. W. G. writes: I have had complaints from several large institutions I serve that my corned beef is tough and too salty. I would like to know about what proportions of salt and saltpetre to use. It is only recently that I have had these complaints, in fact, I have been in the retail business for about ten years and have been very successful with my corned beef.

Ans.—If you will use the following in curing plates, rumps, briskets, etc., for corned beef, you will have no trouble. Use for 100 lbs. of meat:

Eight pounds of common salt, 1 lb. of **Freeze-Em-Pickle**, 2 lbs. of best granulated sugar, 5 gallons of cold water.

Cure the meat in this brine fifteen to thirty days, according to weight and thickness of the pieces. If you are taking pieces out of the brine from day to day and adding others, you should keep up the strength

of the pickle to sixty degrees by adding a small quantity of **Freeze-Em-Pickle** and salt from time to time as you withdraw and replace the meat. One of the first essentials to producing first-class corned beef is to be careful about the temperature during the curing period. An even temperature of 38 degrees Fahrenheit is always the best for coolers and for curing meat. If maintained at this degree, there will be no trouble from taking on too much salt, provided, of course, the meat has been properly chilled through before placing it in the brine for curing. In order to produce a good cure, all the animal heat must be extracted from the meat before it is packed, otherwise it will become soft and spongy in the brine, and pickle-soaked.

KEEPING HAMS AND BACON SIX MONTHS.

Query.—A. J. M. writes: I would like to know how to keep hams and bacon in first class shape for the next six months without their getting mouldy and with the least possible shrinkage.

Ans.—There is no practical method for keeping hams and bacon for so long a time after they are smoked without their getting mouldy. There is a method for keeping them in sweet pickle for any length of time, provided you have cold storage facilities. All kinds of pickled meat if stored in a cooler in which the temperature is kept down to 28 degrees can be kept in this cooler for a year or even longer, and when removed will come out like fresh cured meat. Hams and other meats are often purchased when the market is low and stored in a freezer and kept here until such a time that they are in greatest demand and will sell at the highest price. At a temperature of 28 degrees the meat will not freeze after it is cured, and the brine, of course, does not freeze at that temperature. When meat is taken out of such cold storage to be smoked, it should be first soaked from three to five hours in fresh water, and then washed and smoked the same as regular fresh cured meat. Farmers often bury their smoked meats in their oat bins, and are enabled to keep them in good condition for some time, but this is a method which, perhaps, does not suit your purpose. It is best to keep the meat in sweet pickle until you are ready to smoke it, as this will insure a much better article.

USES FOR DRIED BEEF ENDS.

Query.—C. E. C. writes: "Can you inform me the best and most profitable way for disposing of my Dried Beef ends? I am in the sliced Dried Beef business and have no way of using up my ends. Thanking you in advance."

Ans.—There are three ways for disposing of beef ends to advantage and profit. They may be ground up in an Enterprise Chopper and sold to hotels and restaurants for use as Minced Dried Beef to be prepared and served in cream. They can also be sold to concerns engaged in the baked bean business, where the ends can be cut up and baked with pork in the beans. Restaurants can also use dried beef ends to excellent advantage by putting them in soup. They will give a delicious flavor to all kinds of soups, if boiled at the same time with other soup meats.

HOW TO PREVENT HAMS FROM SOURING IN THE HOCK.

Query.—C. F. G. Co. write: "We have a lot of hams that we put down in dry salt to cure about six or seven weeks ago, and we have discovered that they have become tainted in the hock, while the balance of the piece of meat is all right. Can you tell us any way to rehandle or overhaul these hams to save them? The front or butt end of the ham is sound and all right and sweet; the bad part is in and around the hock end or leg end. Could this taint and odor be removed and the meat made sweet by putting these hams down now in a strong salt brine and punching holes in the hock end of the pieces so that the brine could quickly get into the tainted part? Would salt brine save them now? We will thank you for any advice or plan of action that will help to save us from loss."

Ans.—It is more difficult to cure hams by the dry salt process than it is by the brine process. If these hams had been pumped before packing them in the salt, there would not have been so much danger of shank sour. Hams being very thick, it takes a long time for the salt to draw through them; therefore, if they are first pumped and packed in dry salt, you can readily see that the salt draws through quicker and thus gives them a chance to cure from the inside as quickly as they would cure from the outside. Only under one condition can you pump these hams, make them sweet and save them. For instance, if the hams are taken from

the salt and upon trying them with a ham trier they are found to be sweet but turn sour when they are placed in the smoke house, then you can save them. Such a condition would show that the hams are not fully cured around the bone and around the shank joints. In that event, they can be pumped with pickle and fully cured around the bone so that they will not sour when placed in the smoke house. It is necessary to explain that meat is frequently perfectly sweet when it comes out of cure, but it is not fully cured. In such a condition when it is placed in a warm smoke house, it will sour in the smoke house. This, of course, can be avoided by fully curing the hams. If, on the other hand, the hams are already sour and tainted when they come out of the cure, whether it be dry salt or sweet pickle, then nothing can be done with them to make them sweet. Meat once spoiled, remains spoiled. If the hams are sour when they come out of the cure, but sour only in the shank, then the proper thing to do is to cut off the shank; in other words, cut off all the sour or tainted meat and use the butt ends for boiled hams. You can boil and slice them and sell them in your store. You must be careful to cut off all the tainted parts because any of the tainted meat which is left will taint all the rest of the meat when the butt is boiled. You, of course, understand that during the process of boiling, the good meat will absorb the taint from the bad meat. We regret that you did not write us for advice before you began curing the hams, as we would have advised you to cure in brine. We will send you by mail, free of charge, our book, entitled "Secrets of Meat Curing and Sausage Making," which covers every point that its title indicates. The advice given in this book as to the handling of meats, you will find very valuable and covers the whole ground, from the condition of the animal before killing to the handling of the meat through the chill room and through the entire curing process. We call your special attention to the various articles for curing meats, which will give you the temperature for curing, how to overhaul the meat, how to pump the meat and how to make the brine for pumping. Full directions for curing the hams you will find carefully indexed. By following the advice given in these pages, you will have no loss from the souring of meats, but on the contrary, will be enabled to turn out meat of the highest quality possible.

BUILDING A COOLER.

Query.—W. G. H. writes: I have about completed a cooler except the floor and am undecided whether to make it of plank or cement. I thought you could give me the desired advice. One room is 16 feet square inside; 7 feet to joist with 7 feet of solid ice above, or about 50 tons capacity. The walls are 2 feet thick; 8 inches sawdust, 4 inches dead air space, 8 inches sawdust, with four thicknesses of one-inch boards, thus making the 2 feet. The building has these walls on all sides and partitions. I expect to use the drip from the above to cool another room, 8 feet by 16 feet inside, and will have the water run around this room in gutters (sheet iron) fastened to the wall. I want this as dry and as free from mould and dampness as possible and, therefore, am not sure as to whether a cement floor will be what is needed, though it was my intention to use cement. There is a 2-foot stone wall under the cooler which sets on sand—this sand having been washed up at times past by the lake. There are now fifty tons of ice over the cooler and back of this is an ice house, 16 feet square, inside filled with ice 14 feet high. This makes the building 20 feet wide by 48 feet long, by 20 feet studding. For ventilation a four-inch square flue will run from the bottom in one corner and from the top in the opposite corner of the cooler to the top of the roof, and above it, acting as chimneys. I want to use these coolers for fresh meats, packing hams and bacon, storing eggs and most anything that there is any money in, which requires to be kept in good condition. Your advice will be appreciated.

Ans.—You are building your cooler on very good plans. However, we would advise the use of cement for the floors. It will be found much better than wood, much purer and cleaner, and withal much drier. You speak about putting two ventilators in your cooler, which is all right, but you should be sure to provide these ventilators with slides, so you can shut them off and regulate the ventilation according to your wishes. Of course, you understand that it is not well to have the ventilators open all the time, as it would result in quite a loss of ice. The ventilators should be open only when the room needs ventilation, which will be at well-defined periods, or varying according to the amount of material in storage. Your plan of using the drip water of the ice and running it in pans will work all right. We have seen this method applied, and it was always satisfactory. Be sure to use galvanized iron gutters for the pans, not sheet iron, as it will rust easily.

WHY BOLOGNA "TAKES WATER" IN COOKING.

Query.—H. P. writes: "Sometimes I have bother with my bologna taking water when cooking them. Can you tell me what to do to prevent this trouble?"

Ans.—The difficulty you mention is caused by the sausage not being properly boiled. Ordinary round or long Bologna should be boiled in water of 160 to 170 degrees Fahrenheit for about thirty to forty minutes, and thick, large Bologna should be boiled in water of 155 to 160 degrees for from three-quarters to one hour, according to the size. If the sausages are very large, it will take from one and one-quarter to one and one-half hours to cook them properly. After sausage of any kind have been cooked, they should be handled as follows: Pour boiling water over them to wash off all the surplus grease that adheres to the casings, and then pour cold water over them to shrink and close the pores of the casings. This is very important and should be closely observed by all packers and sausage makers who wish to have their sausage look nice and keep their fresh appearance. The shrinkage and quality of cooked Bologna depends considerably upon the temperature in which they have been boiled. It is very necessary for every man who cooks sausage to use a thermometer.

WHY BOLOGNA SHRIVELS.

Query.—T. B.: Can you tell me the reason bologna shrivels when it is taken from the hot water? It looks fine until it gets cold.

Ans.—There are several reasons why your bologna might shrivel when taken out of the boiling water. First, it might be that you do not cure your meat right before the bologna is made, and second, you probably do not use the right kind of a binder, and third, you probably boil the bologna in too hot water. If when the meat is cured properly and you do use the right kind of a binder, the bologna shrivels when taken out of the boiling water, it is because you are boiling it at too high a temperature. Before making bologna you should sprinkle **Freeze-Em-Pickle** over the meat and leave it for a few days. We refer to our instructions for preparing bologna trimmings, which will be found in our book, "Secrets of Meat Curing and Sausage Making."

ADVICE ON CURING HAMS AND BACON.

Query.—E. A. S. & Co. write: I have taken a barrel of meat, hams and shoulders, which I cured in my ice box after your instructions, and I wish to say that it is as fine as was ever produced by anyone. My ice box holds well, standing at from 38 to 39 degrees, but it is small and only has room for one barrel in it. I have made arrangements to try packing in the house this winter. I have a closet made of brick on both sides and by proper ventilation in cold weather so as to keep it from 35 to 40 degrees, I think I can save hams all O. K. in tierces. I have about ten oak tierces for the purpose. (Is that all right?) I have an old ice box in the rear 8x8 feet with a good roof on it, walls filled with sawdust. I would like to know if I can fill this with hams and shoulders when the weather gets cold and just dry salt them. Can I save them by just letting them stay there all winter until next spring? I can put in a layer of hams and cover them with salt, then put in another layer and cover with salt, and so on until I fill it. I would like your opinion and advice as to these methods. I kept side meat this way last winter just leaving it in salt.

Ans.—If you keep the temperature of the small room which you mention at from 35 to 40 degrees it will answer the purpose for curing. The oak tierces for curing are all right provided they are new. We advise that you wash them out with scalding hot water, so as to get rid of the oak taste. If the tierces are not new, then you must make doubly sure that they are scalded out thoroughly and at the same time you should use our Ozo for cleansing them.

The old ice-box which you mention can be used for dry salting hams and shoulders when the weather gets cold, provided you do not let the meat freeze. You must not let the temperature get below 35 degrees, because at a lower temperature, meat will not take on salt. Hams can be dry salt cured just the same as side meats, but when hams are very thick, we would advise that you pump them. Our book, "Secrets of Meat Curing and Sausage Making," will give you full information as to the pumping process and a formula for making the pumping brine. Hams are very seldom dry salt cured; they are nearly always sweet-pickle cured. A sweet pickle or sugar cured ham has a much finer flavor than the dry salt cured ham.

If you pack side meat properly and overhaul it regularly until it is fully cured, and if you keep the temperature of the curing room at about 38 degrees, you will have no trouble in keeping dry salt meat in salt all winter. Of course if you keep it in salt

too long, it will get very salty. Our book on curing meats will give you full directions for dry salt curing. Hams, after they are fully cured in brine, can be rubbed with salt and kept in a cooler for several months, and if desired, all winter, but the shrinkage will be great and they will take on salt and might become too salty for your trade.

WHY OIL SEPARATES FROM LARD.

Query.—E. & W.: We are having trouble with our lard; the oil separates from the lard during the warm weather so part of the lard is really oil, and we cannot use it in that condition. Our business is too small to justify us in employing a practical man to take charge of our lard. We ask you for your advice.

Ans.—To keep the oil from separating from the lard, you should carry out the following directions: First, you should provide yourself with a lard cooler with an agitator attached, as the lard after it is rendered and when it begins to cool should be agitated until it becomes thick like cream, before it is run into the buckets. If lard is not agitated, when it is cooled the stearin crystallizes and the oil separates from the stearin , but by chilling the lard and by agitating it while it cools, the stearin does not get a chance to crystallize and the oil will not separate and the lard will keep better in this condition. Lard that is put up in winter for summer use is much improved by adding about ten per cent of tallow, but when this lard is sold, it should be sold as lard with ten per cent of tallow added. If you wish to treat the lard that you have on hand, we advise you to treat it as follows: For every 100 lbs. of lard, put 100 lbs. of water in your lard kettle; add to it four ounces of our Lard Purifier, and throw 100 lbs. of lard into this water. Start the fire and gradually heat it until the lard is melted and is as hot as it will stand without boiling over. Keep on stirring the lard until it begins to melt, so as to thoroughly wash it. After the lard is thoroughly washed, you will find a certain amount of scum will come to the top, skim this off and then allow the lard to settle for about two hours, so that all the water will separate from the lard and settle down at the bottom. Skim the lard off the top of the water and then let it cool, but keep on agitating it or stirring it while it is cooling, until it is thick like cream.

COATING BOLOGNA SAUSAGE NOT NECESSARY TO PREVENT MOULD.

Query.—E. D. writes: I would like to ask you if you have anything to coat bologna with after making? I think it is called Gloss or Lustre; have seen it used, but have not been able to find out where to get it.

Ans.—What you refer to is Bologna Varnish. The use of such a preparation has been practically discontinued as it does not conform to pure food laws; it is not proper that a varnish should be put on the outside of food of any kind. Bologna Varnish is made from shellac, and shellac is used in all kinds of furniture varnish, so you can readily see that it is not the proper thing to use on Bologna. In former years, the use of varnish was quite general, but it was finally discontinued, and is now practically a thing of the past. If you want to prevent your Bologna from getting mouldy, you should make them as follows: First, cure the meat with **Freeze-Em-Pickle** as directed in our book, "Secrets of Meat Curing and Sausage Making," and add Bull-Meat-Brand Flour to the meat, as this absorbs the moisture. Bologna made by the **Freeze-Em-Pickle** Process keeps fine and will not mold for a reasonable length of time.

MAKING SOAP FROM TALLOW.

Query.—F. B. writes: We have a little meat business and quite often have on hand a surplus of tallow. Now we have been thinking probably we could put this into a soap, something cheap that would not cost us too much to put on the market. Can you kindly give us any information in the matter, and if the idea is a practical one for a small shop like ours?

Ans.—It would not pay you to undertake to make a hard soap in a small way, as it would be necessary for you to compete with other soaps on the market, and you are aware that laundry soap sells at a very low price and is put upon the market upon a very small margin of profit. You would also find it quite a task to make hard soap, and the time required would hardly justify you to undertake it on a small scale. If you can dispose of soft soap in your locality, we would advise you to use your surplus tallow in that way, but, of course, this suggestion from a financial point of view would depend entirely upon whether there is a sufficient de-

mand for such an article in your vicinity. Possibly you could work up a trade among private families and sell it to them for scrubbing purposes, also to hotels, stores and restaurants, but as your town is small, you might have difficulty in disposing of a sufficient quantity to make it pay you. On the other hand, it would not cost you much to make the experiment. You are surrounded by a good hog-feeding country, and it is possible that you could dispose of quite a quantity of soft soap to the farmers, as it is a very fine thing for hogs, and the truth of the matter is, their hogs would be much better off if they would feed it frequently. You might be benefited more by this suggestion than by sales from other sources.

The following is a recipe for making soft soap with potash: To 20 pounds of clear grease or tallow take 17 pounds of pure white potash. Buy the potash in as fine lumps as it can be procured, and place it in the bottom of the soap barrel, which must be water-tight and strongly hooped. Boil the grease and pour it boiling hot upon the potash; then add two large pailfuls of boiling hot water; dissolve 1 pound of borax in 2 quarts of boiling hot water and stir all together thoroughly. Next morning add 2 pails of cold water and stir for half an hour; continue this process until a barrel containing thirty-six gallons is filled up. In a week or even less, it will be ready for use. The borax can be turned into grease while boiling, and also 1 pound of rosin. Soap made in this manner always comes, and is a first-rate article, and will last twice as long as that bought at a soap factory. The grease must be tried out, free from scraps, ham rinds, bones, or any other debris; then the soap will be as thick as jelly, and almost as clear. To make soft soap hard put into a kettle four pailfuls of soft soap, and stir in it by degrees about one quart of common salt. Boil until all the water is separated from the curd, remove the fire from the kettle and draw off the water with a siphon (a yard or so of rubber hose will answer); then pour the soap into a wooden form in which muslin has been placed. For this purpose a wooden box, sufficiently large and tight, may be employed. When the soap is firm turn out to dry, cut into bars with a brass wire and let it harden. A little powdered rosin will assist the soap to harden and give it a yellow color. If the soft soap is very thin, more salt should be added.

PLANS FOR SAUSAGE FACTORY.

Query.—O. C. L. writes: I am now in business again on my own hook, so please send me your book on Meat Curing and Sausage Making. I will, in the near future, equip my market with an up-to-date sausage factory. I have the following machinery: 1 six-horse power gasoline engine, silent cutter, Enterprise machine, 1 bone cutter, 1 steam boiler for rendering lard, cooking sausage, etc. The room I intend to place this machinery in is 15x25 feet; would like to hear some of your suggestions, and plans in placing the machinery; would appreciate this very much. Has the freezing of pork sausage any detrimental effect on the flavor of the sausage? Accept my well wishes.

Ans.—The machinery you enumerate will give you a sausage plant that is quite complete. We think, however, that your room is a little bit small in which to place so much machinery. If you could put the boiler and rendering kettle in another room, away from the sausage factory, it would be better. You would probably be able to make such an addition as would answer your purpose at a very small cost. This arrangement would make it much more convenient because the boiler and the rendering tank in your sausage factory will make it very hot. The arrangement or disposal of the machinery will not make material difference in a room of the size mentioned. You can arrange it most any way to best suit your convenience.

The freezing of pork sausage certainly has a most detrimental effect on the flavor. Freezing meat always tends, to some extent, to spoil the flavor of the meat. When the albumen of the meat is frozen, and is afterwards thawed out, the albumen leaves the cells of the meat and in that way the flavor is lost and the meat becomes insipid.

PURIFYING TALLOW.

Query.—T. W. C. writes: "I am tanking mutton and beef tallow together at 40 pounds pressure, and would like to know the best way to use your tallow purifier so I can use my tallow with cottonseed oil to make a lard compound."

Ans.—It would not be practicable to use our Lard and Tallow Purifier in the tank. It can be used to greatest advantage in an open jacket kettle. You can treat the tallow in the jacket kettle after it is rendered and comes from the steam tank.

SWEETENING INSIDE OF ICE BOXES.

Query.—J. J. N. writes: "Will you please let me know of something that will sweeten the inside of my ice box? It gets to smelling foul in spite of everything I can do for it."

Ans.—This is a difficulty which can be readily overcome. If you will use our Ozo Antiseptic Washing Compound in hot water for washing the floors and the walls and also racks or shelves that you may have in the ice box, it will effectually sweeten and purify the wood. When this has been done, you should make a practice of sprinkling a small quantity of **Freeze-Em** very lightly on the floor, shelves and racks and also a little on the walls of the ice box. Some also should be shaken out of our dusting can and thrown into the air in the interior of the box. Sufficient should be used to thoroughly impregnate the air with **Freeze-Em** so the powder will settle all over the inside of the box. You will thus get the benefit of the well known properties of **Freeze-Em** and the air will be entirely sweet. By repeating this process occasionally, you will never have further trouble from your ice box but will always be able to keep it clean and pure so that its odors will not affect the meat or other contents.

STARTING A BUTCHER BUSINESS.

Query.—M. E. A. writes: Will you please forward me another copy of your desirable book, "How to Cure Meat and Make Sausage"? And if it is not too much trouble, I would like to have you advise how it is best to start in the butcher and pork packing business in a small way. I have about $700 capital and wish to ask how is the best way to fit up a retail store without too much expense and yet to have it look good, and also to fit up a sausage kitchen and have everything that a man needs to run the business successfully. I may as well state that I have had lots of experience, but after reading your book and the advice that it gives I am sure that even experienced men can learn a lot by reading it.

Ans.—With such a limited amount of capital, it would be advisable to buy second-handed fixtures. These can always be obtained much cheaper than new ones, and you can get good fixtures which will answer the purpose, but they must be neat, clean and in good repair. If you intend to do your own butchering, our advice is that you make arrangements with some butcher who has a slaughter house, and where you can

do your butchering, and pay him a certain amount for each animal slaughtered. A very important point that we advise you to follow is to sell everything for cash only, as your capital is not sufficient to give credit to anyone. Were you to give credit and make a lot of book accounts, you would soon run out of money and would not be able to buy large stock and supplies for your market. We also advise that you induce your customers to take their meat home with them, and thus relieve yourself of the necessity of keeping a horse and wagon for delivery purposes. This would save quite an outlay in capital, and a great deal of expense and time. You can then announce with a small advertisement in the daily paper that you sell for cash only, and that you can afford to be more liberal with your customers than you could if you carried accounts, and because you do not incur the expense of delivery. Such an advertisement with placards in your store, no doubt, would result favorably. You must remember at all times that your capital is limited and that you must "trim your sails" accordingly. It is the over-reaching the limits of the possibilities of capital that make the most failures among tradesmen. We would not advise you to advertise meat at a cut price because you sell for cash; people do not want stuff that is cheap, for if you sell stuff at a low price, they imagine there is something wrong with it. Charge the same price that all the other butchers do, and in that way, keep their friendship. If a woman gets something that she doesn't like and brings it back, tell her that you are very glad she brought it back, if it did not suit her, because you never want any of your customers to keep anything that does not please them.

A sausage room can be rigged up very cheap; all you need to start with is a small Enterprise grinder, so that you can grind up your trimmings and work them into sausage, and by working the meat trimmings up into the different formulas that we give in our book, "Secrets of Meat Curing and Sausage Making," you will not have any loss, as all of your trimmings can be worked up to good advantage. You also should make a great display of your own cured corned beef and turn out fine corned beef, so that when your customers buy it, they are well pleased. The main thing in the success of running a retail market is that the butcher understands how to buy his live stock so that

he gets the right quality of beef and gets it at the right price. If you have good meats to sell you will have no trouble in selling them, but if you have poor goods to sell, you may sell them to a customer once or twice, but the third time the customer will not come near you. The same thing holds good with you; if you were buying some of your supplies from the jobber and the jobber did not send you good goods, you may try him once more and if he again sends you poor goods, the third time you certainly will not buy from him, but you will go to some other jobber who will give you the best goods for your money. Your customers are just as smart and as sensitive as you are, and want the same kind of treatment that you like, so if you will always treat your customers as you would like to be treated yourself if you were buying meat at a market, you are bound to meet with success.

CUTTING UP MEATS—NECESSARY FOR EXPERIENCE.

Query.—J. J. writes: I have decided to go into the meat business and would like to know if you can advise me of some booklet or pamphlet on cutting up meat; also let me know the price of your book, and if you know of a good firm handling butcher supplies and refrigerators.

Ans.—We judge from your inquiry that you are inexperienced in the meat business, and if such is the case, we would advise that you go to work for some good butcher for a while before going into the business for yourself. You could there learn the practical side of the business, and provided you do not now understand how to cut up meat to the greatest profit, you could acquire knowledge upon these points which would be of more value to you than volumes that could be written upon the subject. We most emphatically advise you to learn the business thoroughly before embarking into it on your own account. We take great pleasure in sending you our booklet, "Secrets of Meat Curing and Sausage Making," which you will find of great value to you in teaching you to cure meat and make sausage.

IMITATION FREEZE-EM PICKLE.

Query.—L. M. writes: "M——— & ———, from whom I buy most of my butcher supplies, handle an imitation of your Freeze-Em Pickle which they claim is the same as your preparation. I do not want it and will not have it. They tried to convince me that what they had is what I want, but I have used Freeze-Em Pickle for years and, knowing from your advertisements that there are imitations of it, I want to steer clear of them. Will you please send me the name of a jobber handling Freeze-Em Pickle near me?"

Ans.—This is a clear case of an attempt for a substitution of spurious goods for those of our manufacture. These dealers can not help knowing that our customers want **Freeze-Em-Pickle,** and nothing else, but for the sake of reaping an illegitimate profit, they misrepresent imitation goods as being the same as ours. We wish to state that there is no other preparation which is the same as **Freeze-Em-Pickle,** and all claims to that effect are absolutely false. They are merely the tricks of illegitimate dealers to pirate the good reputation made by our preparations. In order to be convinced of the superior quality of **Freeze-Em-Pickle,** it is only necessary to test it with any preparation purporting to be the same or similar to it and selling under similar names, which are calculated to deceive.

SOURING OF HAM IN SMOKE HOUSE.

Query.—M. P. M. writes: "I am having trouble with my hams souring in the smokehouse. They seem to get too much smoke. What can you suggest that will help me to avoid this trouble and to keep my hams sweet?"

Ans.—You are mistaken in supposing that your hams sour from getting too much smoke; that is not the trouble. Hams will not sour from such cause. Your trouble is owing entirely to the fact that the hams are not properly and fully cured before going into the smoke house. Smoke aids to preserve hams and will not cause them to sour. They sour because the portion that has not been thoroughly cured, which is generally close to the bone, has not been reached by the brine. In many cases souring comes from imperfect chilling of meat before putting it into the brine; then again you may not have overhauled the meat at the proper time and with the frequency which

good curing requires. In the first place, the hog should not be killed when overheated or excited. Second, after they have been scalded and scraped, they must be dressed as quickly as possible, washed out thoroughly with clean water, then split and allowed to hang in a well ventilated room until partly cooled off. They should then be run into a cooler or chilling room as quickly as possible, where the temperature should be reduced to 32 to 34 degrees Fahrenheit. They should be allowed to thus chill for 24 hours for medium size hogs. When hogs are properly chilled, the temperature of the inside of the ham or shoulder will not be more than one to one and one-half degrees higher than the cooler. Those without ice machinery for curing, who are using common ice houses, can employ the crushed ice method for chilling the meat. By this is meant to put the meat on the floor and throw cracked ice over it, and thus allow it to remain over night. After being thoroughly chilled, the hams must undergo the various processes which you will find set forth in our book, "Secrets of Meat Curing and Sausage Making," which we take pleasure in sending to you free of charge. If you will follow the directions contained in this book you will never have trouble with soured hams from imperfect curing or other causes.

CLEANING CASINGS.

Query.—S. & H. write: "I would like to know if you have any preparations for cleaning casings. We clean all the casings we get and would like to get some chemicals to take the tallow and lard off of them."

Ans.—There is no preparation that will free the lard from casings. If you use something that is strong enough to take off the fat, it will eat up the casings as well. The only thing practicable that can be done is to wash the casings thoroughly and change the water a number of times. In the last washing water it would be advisable to put in some washing soda as that will soften the water and assist in cleaning the casings. The fat you will have to remove by hand. There are machines made for removing the fat from casings, but it will not pay you to go to the expense of making such a purchase unless you clean a very large amount of casings per day.

CAUSE OF "RUSTY" MEAT.

Query.—R. J. B. writes: "We keep our meat in an ice box 35 degrees cold and the barrels we used in curing it were galvanized, and we have used them for five years. We use the regular pickling salt. Our meat comes out rusty. What can you suggest?"

Ans.—If your cooler is kept at 35 degrees, you must have an ice machine instead of the regular ice box or cooler, and 35 degrees is too cold for curing purposes. An even temperature of 38 degrees is the proper one for curing meat, and all packers who use ice machines should endeavor to keep their coolers at a temperature not varying from 37 to 39 degrees, and they never should be allowed to get above 40 degrees. Meat will not cure in any brine or take on enough salt when dry salted if stored in a room that is below 36 degrees. If meat is packed even in the strongest kind of brine and put into a cooler which is kept at 32 to 33 degrees and thus left at this degree of cold for three months, it will come out of the brine only partly cured; it will, therefore, only keep for a short time and will start to decompose when taken into a higher temperature. If you have used galvanized iron tanks for five years, it is possible that the zinc or the galvanizing is worn off on the inside of the vats so as to expose the iron. Brine will rapidly rust iron and that will cause your meat to become rusty. Galvanized iron tanks for curing are all right until the galvanizing is worn off and the moment this happens, the tanks are useless for curing purposes. Salt that is rusted or salt that is shoveled with a rusty shovel will also cause rusty meat. It is absolutely necessary that the salt be pure and free from rust. If live stock is driven for some distance and slaughtered while it is overheated, the meat will not cure properly and will also turn out rusty. Stock that has been driven should always be allowed to remain in the pens over night. We send you our book, "Secrets of Meat Curing and Sausage Making," which you will find full of valuable information in reference to curing of meat. If you will follow the directions contained therein closely, you will always have good results.

SALT FOR BRINE—BOILING BRINE—ROPY BRINE.

Query.—W. M. writes: "Is common barrel salt or rock salt the best and cheapest to use for making brine? I have been using rock salt and I think it is sweet, but in using rock salt I have to boil it in order to dissolve the salt. Is it necessary to boil the water if it is pure? I am having trouble with my brine. It becomes jelly-like in summer and in winter. What is the cause of this?"

Ans.—Evaporated salt, or what is known as the ordinary barrel salt of a good quality, is generally approved by butchers for making brine. Rock salt is much used by the large packers, as it is a stronger salt, but their facilities for curing meat are altogether different from those of the butcher and the ordinary curer.

It is not necessary to boil the water for brine if you know it to be perfectly pure. If its purity is doubted, it should always be boiled and the impurities which rise to the top should be thoroughly skimmed off, or if they precipitate the water should be carefully drawn off. When brine becomes jelly-like, you mean that it gets ropy. This condition is owing to a great many causes; sometimes it is due to the sugar which may be of low grade or unrefined, or where molasses and syrup are used, it quite often results. The best grade of granulated sugar should always be used for brine. Sometimes the ropiness of brine is due to the packages in which the meat is cured. This is especially true when syrup barrels are used. One of the most common causes of ropy brine is owing to the fact that the meat is cured in too warm a temperature. If the curing temperature is kept from 38 to 40 degrees, the brine will remain thin and not get ropy, but there is always risk in a temperature higher than we have given. If the meat has not been properly chilled before putting it in pickle, ropiness will also result. Great care should always be given to meat before putting it in the brine, as it will become soft and spongy if not chilled through to the bone. When in this condition it becomes pickle-soaked and contaminates the brine.

PACKING EGGS.

Query.—D. B. writes: "I have been using your goods for some time back and they give the best of satisfaction. Can you give me a good recipe for packing eggs?"

Ans.—You will find the following very efficient for preserving eggs: To each pailful of water add two pints of fresh slaked lime, one pint of salt and one ounce of White Berliner Konservirungs-Salze; mix well and then fill a barrel half full of this fluid, put the eggs into it and they will keep for a long time. The eggs, of course, should be stored in a cool room. A cool cellar will answer, but the temperature should never be allowed to get too low—never lower than 38 degrees.

HOW TO TEST VINEGAR.

Query.—G. G. writes: "Do you sell a thermometer or gauge for testing vinegar? How am I to know the degree of strength of the vinegar without a gauge?"

Ans.—Vinegar is tested with a special apparatus called a Twitchel Tester. Unless you use large quantities of vinegar, it would hardly pay you to go to the expense of buying such an apparatus as they are rather expensive and cost about $15 each. If you buy the vinegar by the barrel from the wholesale grocers and specify the degree of strength, they will give you the article desired. If you have any doubts as to the purity of vinegar there are various ways to test its purity. The adulterant of vinegar is sulphuric acid, which increases its indicated strength. Sulphuric acid can be detected by placing some of the vinegar to be tested in a saucer. Put some white sugar in the vinegar and evaporate to dryness by placing the saucer on top of a boiling water kettle. After the water has evaporated if the sugar turns black, the vinegar contains an adulterating acid. In lieu of a saucer, a teacup can be used in which the vinegar and sugar can be placed. The cup can then be placed in a basin of hot water in which it can be allowed to float until the vinegar in the cup is evaporated. If the vinegar contains free sulphuric acid the dry sugar will be found to be blackened. These are simple methods and are claimed to be more accurate as a test than the

use of the Barium Chloride Test. The Barium Chloride Test is as follows: Mix one pound of Chloride of Barium with ten parts of water. A little of this mixture dropped in vinegar will quickly test its purity. If the vinegar contains sulphuric acid, this mixture will make it turn flaky at once, but if it remains clear and shows no change, the vinegar is free from sulphuric acid adulteration. Sulphuric acid makes vinegar show a very high test when, as a matter of fact, it is of very poor strength.

SEPARATING WATER FROM LARD.

Query.—C. W. writes: "I have my lard in such a shape that I don't know what to do with it. It seems that the water will not separate from the lard and the mixture stays about the thickness of cream and about as white. Can you give me any instructions or advice?

Ans.—To overcome your difficulty, we would advise you to remelt the lard and heat it quite hot, even up to 190 to 200 degrees, but do not let it come to a boil. Then let the lard settle. The water and impurities will settle to the bottom. The lard will rise to the top. If you heat the lard to the boiling point of water, that is, 212 degrees, it would do no harm except that the lard will then foam and you will have to be careful so that it does not foam over the top of the kettle. When it foams, it will bring the impurities to the surface, besides much of the moisture will evaporate. Either of these methods will remove your difficulty. You can dry the lard by heating it sufficiently or you can melt the lard and have it hot enough so that the water will settle to the bottom. After the lard is melted, dip it from the kettle, or if you have a lard cooler, run it into the lard cooler; be careful, though, that all water which may be at the bottom of the kettle is drawn off first if your intend to run the lard into a lard cooler. You will have to get rid of the water that is in the lard, so do not stir the lard while the water is still in the kettle. If you dip the lard out of the top of the kettle and place it in a lard tierce, when the lard begins to cool, you can stir it and keep on stirring it until it is thick like cream; it should then be run into buckets. You can readily understand that if there is a large per cent of water in the lard, it will keep the lard soft, which is the trouble you are now having.

DRY SALTING HAMS AND BACON IN A FREEZING TEMPERATURE.

Query.—K. & A.: Will you kindly furnish me with information how to cure breakfast bacon, hams, etc.? I prefer to cure the meat in dry salt instead of a pickle, because the pickle freezes badly in winter.

Ans.—In answer to your esteemed letter will say that if the place where you are curing the meat is so cold that the pickle freezes, you should not attempt to cure your meat with dry salt, because you will not be able to cure meat in that temperature. When meat is put in pickle and it is kept in a place which is below freezing point, the meat will not cure, as meat does not take on salt below 36 degrees above zero. If you pack the meat in dry salt, it will not cure in any temperature below 36 degrees, and unless you can fix your room so as to keep it at the right temperature, we would advise that you abandon the curing of meat, because your loss from spoiled meat will be so great that it would not pay you to cure your own meat, and it will be much cheaper for you to buy it. If you will read directions carefully in our book, "How to Cure Meat," you will understand why it is necessary to keep the meat at the right temperature when curing it.

HOW TO SWEETEN AND WHITEN LARD.

Query.—C. W. F. writes: "I have about two tons of lard in fifty-pound tins that has become the least bit rancid and dark. Will you please tell me if your Lard Purifier will bring this lard around sweet and all right? I have a good lard agitator run by power."

Ans.—Our Lard Purifier will remove the rancidity, make the lard white and purify it. The lard should be remelted in a clean kettle with 100 pounds of water to every 200 pounds of lard. Before adding the lard, dissolve in the water one pound of Lard Purifier for every 200 pounds of lard to be treated. Then boil the lard and water together for five minutes, stirring constantly, so that the water and the lard are thoroughly mixed. Then allow the water to settle to the bottom of the kettle and skim the lard off the top or run the water off through a faucet at the bottom of the kettle. Rancid lard or tallow treated in this manner will be perfectly sweet.

BULL-MEAT PREFERABLE FOR SAUSAGE.

Query.—Z. & R. write: There is a prevailing notion among local butchers that bull meat possesses qualities which make it superior to first-class steer or cow meat for making bologna and weiners. Is this not an erroneous idea? How can bologna and weiners be prevented from turning dark and shrinking within a few days after making if exposed to the air?

Ans.—The opinion of your local butchers is correct as far as it concerns bull meat as the best meat for bologna and wienerwurst. The reason for this is that bull meat contains a great deal of gelatine in various forms and far more than even the meat of either steer or cow. If you take the bull meat and chop it up, you will find that it is sticky and binds together, while if you take meat from an aged cow and chop it up it will not bind together, is mushy and soft to the touch, and when cooked frequently crumbles and falls apart. But the great advantage of using bull meat in preference to that of the steer and cow is on account of its greater absorption of water. The more water you work into the meat while it is being chopped, the more tender and juicy will be the sausage. Bologna made without adding sufficient water while being chopped is apt to be dry when cooked and unfit to eat. As it is often impossible for the local butcher to secure bull meat, we invented the preparation known as Bull-Meat-Brand Flour, which gives to sausage the same properties as does bull meat. Its use has become universal and it is no exaggeration to state that it is indispensable to the sausage maker. In answering your next question, we can say that the probable cause in most cases why sausage dries up, shrivels up, shrinks or turns dark within a short time after being made is because there wasn't sufficient addition of water during the process of making the sausage. It is also possible that these effects of which you complain were due to causes produced by the way you salted your meat or what you salted it with. If you will follow our instructions on Bologna making given in our book, "Secrets of Meat Curing and Sausage Making," you should have no further trouble. The book is sent free.

MEAT MOULDING IN A COOLER.

Query.—M. & S. Co.: Please forward to us one of your brine tester hydrometers. Ought fresh beef to mould in a cooler where the temperature is 36 degrees, after being in there ten to fourteen days? We have lost meat this way in a cooler with three coats of white lead throughout and the temperature maintained by ice. Not only has meat moulded, but it has had a pine taste.

Ans.—As requested, we have sent you a hydrometer by express. You wish to know if fresh beef stored in a cooler ten or twelve days should begin to become mouldy. You say that your cooler is cooled by ice and that its temperature is 36 degrees. We are inclined to believe that your thermometer is not accurate. It would be very difficult to get the temperature of a cooler down to 36 degrees with ice. If an ice box is kept closed from Saturday night until Monday morning the temperature runs down to 36 or 37 degrees, but where it is in constant use, and opened from time to time throughout the day it is almost impossible to reduce the temperature to 36 degrees, unless the cooler is a very small one and a large amount of ice is packed in the ice chamber above. Try another thermometer. It is important to have one that is right. Do not buy a cheap thermometer for a cold storage tester. If your cooler is constructed properly it should be perfectly dry and all the drip water drained without entering the storage chambers. A cooler, even when cooled with ice, should be so dry on the inside that a match might be struck on the sides. If the cooler is moist, there is no need to search further for the cause of your meat moulding. If the cooler is perfectly dry then the beef will keep about two weeks without moulding, then it is liable to mould slightly, but not enough to do any harm. It is frequently stored three weeks before it is consumed, and when kept that long it is tender and juicy—in other words, it is "ripe." You say that your meat tastes of pine. You did not state whether or not your cooler was a new one or not. If it is a new one and has been properly constructed it should not give meat a taste; if it has been made from boards not thoroughly dry it will cause meat to taste of pine and it might even be responsible for some mould. Then again the walls

may have been stuffed with green pine sawdust, and this will cause trouble. It may be that your cooler is a home-made one, not properly constructed; perhaps the circulation is not right. You merely state that the meat moulds and tastes of pine, whereas you should have given full details. If you will send us a drawing of your cooler and full details we will be able to give you the cause of your trouble and the remedy as well.

CAUSE OF FAILURE IN CURING BACON.

Query.—T. K. writes: "We have been having trouble with our bacon. We put it down in second-hand lard tierces which we got from the large bakers here. We thoroughly cleansed them with boiling water before using them, and have been careful to weigh everything and measure the water we made the brine out of. We used brown sugar, the same as we have always used previous to this time. Our bacon was thoroughly cooled out before it was salted, and was never frozen. After being put in the pickle, we let it stand in the back part of the shop, where the temperature was often below freezing, but never cold enough to freeze the meat in the brine. We repacked it by moving from one tierce to another, always putting the same brine on the meat. We usually let our bacon in the brine for six weeks, unless it is very heavy, then we let it in a longer time. We usually keep four tierces full, and by moving from one to another always have the last one ready to take out and smoke. We used just the common barrel salt and have always had good results until now; in fact, this time the meat is perfectly sweet, but the fat of it is very dark colored, while heretofore it has always been nice and white. We do all our own killing. If you can tell us what we have done wrong, we would like to know, as we are always trying to improve whenever we can."

Ans.—You have been very fortunate indeed to have escaped trouble if you have always cured your bacon as you explain. There are many things which you have done while curing which are likely to cause you serious trouble, and which should never be done in the future. You are lucky that some of the meat did not spoil completely. It is never advisable to use lard tierces for curing, as the the lard is run into the tierces while hot, and the fat naturally soaks into the wood. This fat in time becomes rancid, and is likely to contaminate the brine and also the meat, even though you scald out the tierces, you do not get the grease

out of the pores of the wood. It is always best and safest to use new tierces for curing purposes; in fact, there is great risk in using anything else. You should never use brown sugar for sweet pickle, but the very best grade of granulated sugar. Brown sugar is always more likely to contain foreign substances detrimental to the brine, and in most cases causes the brine to turn ropy, sometimes even causing it to ferment. The purest of sugar should always be used for sweet pickle. You have deviated from one of the greatest essentials to successful curing by not observing the most important of all requirements and that is an even temperature of about 38 degrees during the entire period of curing. You state that your meat was sometimes in a temperature below freezing point, but never cold enough to freeze the meat in the brine. Such a degree of temperature is enough to ruin your meat, as the curing room should never be allowed to go below 36 degrees. The moment you get the temperature below 36 degrees, the meat ceases to take on salt and will not cure; besides, it is likely to spoil in the brine. It is all right to cure heavy Breakfast Bacon six weeks, but bacon from light or small hogs will cure perfectly in twenty to twenty-five days. The meat, however, at a temperature below freezing point would not cure in six weeks or even in a much longer time. We, of course, understand that the temperature in your curing room was not always below the freezing point, but it should never be that cold.

We are going to send you free of charge our book, "Secrets of Meat Curing and Sausage Making," and we will ask you to read carefully all we have to say on "General Hints for Curing Meats," which covers the entire process, including chilling, overhauling, pumping, packing, temperature, etc. You will also note that we advise against the use of molasses and syrup barrels, as they are liable to cause ropiness of the brine. Also note what we have to say in regard to the handling of meat in curing, the chilling room, the condition of the meat, and the proper time to slaughter. If you will read carefully all we have to say in reference to curing in this book and will follow our methods and instructions, you cannot fail to turn out the finest kind of mild cured sweet pickled meat, having a most delicious flavor and a beautiful appearance. We ask you to make the trial and report results.

B. HELLER & CO.

HOG CHOLERA AND OTHER SWINE DISEASES—HOW TO RECOGNIZE AND WHAT TO DO.

Query.—G. O. B. writes: "We feed and fatten nearly all the hogs and cattle that we kill, and of late we have been having poor success with our hogs. They seem to thrive for a while, but after keeping them in feeding lots for a few weeks, they begin to sicken and die; fresh hogs placed in the same quarters also sicken and die. We have, of course, supposed the trouble to be Hog Cholera. Can you give us any advice?"

Ans.—We send full instructions by mail as to handling diseased hogs. The Cholera can be detected in the carcass by congested blotches, purple in color, which show in the skin about the ears, throat, legs and belly. The heart, lungs, liver, spleen and intestines also show congestion and hemorrhages. As to the disease itself, which every butcher should fully understand, the following are the general characteristics and symptoms: The first outward manifestations are fever and shivering spells. Extreme dullness, disposition to keep the nest and to get under the litter. The first stages develop constipation and scanty urine; as the disease progresses, there is diarrhea with fetid discharges. There is an occasional dry cough and congestion is noticeable about the belly, neck, ears and legs, which show purple blotches. The eyes matter, the hogs become very much emaciated and too weak to stand. If forced from the nest, they do not keep their feet long, but draw themselves together, showing extreme gauntness and contraction of the belly. These outward symptoms are generally preceded by an incubation of the disease which is not apparent; as the disease is caused by bacteria taken into the system in food or drink, or inhaled through the lungs, the period of development before the virus affects the blood, might have a variation of days. Much will depend upon the resistance of the hog. In older hogs, it would be prolonged; in fact, some old hogs resist the attack altogether, but shoats and pigs succumb without much resistance. This variation is owing to difference in strength, vitality and purity of blood. The point of attack in Hog Cholera is the blood; the quality of the blood determines the character and strength of the disease. Healthy blood destroys and throws off the germs which create Hog Cholera and the hog is thus held immune.

Unhealthy blood affords nesting places for these germs and thus produces severe hemorrhages in the various organs and lymphatic glands; also ulcerations in the intestines and disintegration of the lung tissues. This is the process of destruction in Hog Cholera, but it all goes on unseen; the outward symptoms sometimes do not develop until it is too late for remedial help; death will often destroy a herd before the presence of the disease is known. Hence, the importance of preventive measures, especially when Hog Cholera is known to be in other herds in the locality. When it is remembered that infection can be carried in the air, in the streams and drinking places and in a hundred other ways, the wisdom of precautionary measures is apparent to all. By regenerating and toning the system of the hog it can be made immune to attack. Blood that is strongly vitalized will expel the virus of the disease and render it impossible for the germs of Hog Cholera to propagate. Owing to similarity of symptoms, but more frequently to the lack of information as to the character of Hog Cholera, the names of Hog Cholera and Swine Plague have been applied to many diseases. Among them are the following:

Gangrene, often called Hog Cholera, but a specific disease which owes its origin to specific causes. Gangrene is the result of smut grain and is most prevalent during seasons of extreme moisture and heat, when the fungus growth of corn is most noticeable. It is also evident in distillery fed hogs and results from blood poison, the sequel of a diet that destroys the assimilative power of hogs by the overheating results of food. Gangrene manifests itself in a sudden attack of the extremities, which break out in a sloughing of flesh about the ears, feet, tail, throat and jowl. These rot off without apparent cause and when the malady attacks vital parts, the animal dies; thus entire herds are decimated. Gangrene is only another name for virulent blood poison; it is specific in character but cannot be classed with the specific germ causing Hog Cholera. It is not contagious; it is epidemic or endemic only to the extent that grain and food are tainted with ergotized fungi and fermentative poisons, or when the malarial conditions of localities produce these abnormal results of food.

Malignant Sore Throat, which manifests itself in vomiting, difficult breathing, suffocating, a protruded,

blotched tongue, high fever and sudden death in strangulation or coughing, is also erroneously classed as Hog Cholera when it appears in a herd in epidemic form. This disease is more properly named Diphtheria, which owes its origin to a specific poison. Pneumonia and Diphtheria are both popularly classed as Hog Cholera, but improperly so. Though just as fatal as malignant swine plague, and of an infectious character, they should be properly designated and diagnosed. Unlike Hog Cholera, Pneumonia is not a disease of periodicity; the hog is always subject to it and is peculiarly susceptible to its fatal effects.

Malignant Catarrh is also given the name of Hog Cholera, but is distinct in form and sequence and is symptomatically, unlike Hog Cholera, caused by specific bacteria. Malignant Catarrh is a severe attack upon the mucous membranes, spreading from the nasal passages to the larynx, windpipe and bronchial tubes and thence to the abdominal organs, including the liver, spleen, kidneys and intestines. The disease is always accompanied with a hoarse, hacking cough and high fever. Breathing is labored, the flanks are panting and there is a marked breaking down of the hind quarters. The disease often lies dormant for some time and then develops rapidly, with fatal results, and in this particular resembles Cholera.

Anthrax, one of the most infectious of all animal diseases, is also termed Hog Cholera. This malady is not frequent among hogs but has developed in certain localities among "Cattle followers." Whenever Anthrax, Bloody Murrain, or Black Tongue makes its appearance among cattle, it is generally communicated to hogs, and shows in swellings or carbuncles about the loins, back, neck and legs, with other symptoms special to that disease.

Swine Fever is a form of Hog Cholera localizing its attack more to the lungs, but finally involving both lungs and intestines. The general symptoms are so similar to Hog Cholera as to render the two forms of the disease hardly distinguishable. It was at one time supposed that both Hog Cholera and Swine Fever or Plague, owed their origin to the same disease germ, but more recent investigation differentiates upon this point. It has been discovered that while their characteristics are similar, they are not identical, nor are the germs similar in structure or habits, the Swine Fever germ being more passive and less aggressive than

the Hog Cholera germ, but finally just as destructive. Swine Fever germs are atmospheric in origin and pass into the system through the lungs, where they first find culture, and thence are carried to the serous membranes and the circulatory system. While not as virulent, the germ of Swine Fever is even more invidious than the germ of Hog Cholera. It will lie in abeyance in the system of the hog for days, weeks or months and await the favorable conditions which enable it to multiply and destroy. During this period of dormancy the hog is apparently well, he is in usual appetite, maintains his activity and growth, but as soon as the limit of his vitality is reached and the system ceases to overbalance its natural losses, there is deterioration in blood and the virus of the Swine Fever germ is deposited all through the system. There is an instantaneous break-down and the violence of the attack of Swine Fever which follows is only measured by the individual strength of each hog.

SMOKING MEAT IMPROPERLY.

Query.—F. & B. write: "We would like to know how to prevent our meat from turning black when smoking. We have the fire underground about three feet from smoke house, then send it underground to the meat. We have smoked but three days and all of the meat is black. Have you anything to wash it off?

Ans.—We are inclined to believe from what little description you have given us that the trouble is due to the contrivance that you use; it does not permit proper combustion of the smoking material, and the result is that carbon is formed, which gets on the meat and colors it black. If you will use hard maple or hickory wood or even oak, and give the fire sufficient draft, you should not have the trouble you experience. It is a good way to build a good, bright fire with maple or hickory wood and then partly cover or bank up the wood with hickory or hard maple sawdust. This will cause the fire to smoulder. We have no special preparation for removing the black color. We would advise you to take warm water and wash the meat with a scrubbing brush. You can have the water quite hot, so that the black can be easily removed, then hang the meat up to dry and if necessary, smoke it lightly for a short time.

HOW TO TREAT PORK WHICH IS TOO SALTY.

Query.—F. B. writes: "We have about twenty barrels of pork that have become very salty in the brine. What would you do and how can we get the brine out?"

Ans.—Salt pork is usually put down in very strong brine, therefore it is perfectly proper that pickled pork should be very salty. If it is desired to store the pork for a long time, it should be left in the strong brine and in order to freshen it so that it will not be so salty, the pork should be washed in fresh water. It is best to handle one barrel at a time as it is to be sold or used in the market. The water in which the pork is soaked should be as cold as possible; in fact, it would do no harm to put a little ice in it. By allowing the pickled pork to soak in the fresh water, a great deal of the salt will be drawn from the meat. The meat should be soaked twenty-four hours altogether, and during the daytime the water should be changed every six hours. After the meat has been soaked, it can be placed in a mild brine, which should not be over 40 degrees strength, but if the meat can be disposed of in a few days, it is not necessary to keep it in the brine at all. It will be sufficient to place it on a shelf in the ice box; at the end of three or four days, it might be necessary to wash it off with fresh water.

IMITATION BULL-MEAT-BRAND FLOUR.

Query.—J. A. S. writes: We recently ordered from a jobber 50 lbs. of Freeze-Em Pickle and 100 lbs. of Bull-Meat Flour. The Freeze-Em Pickle was not shipped but we received a barrel of what is claimed to be Bull-Meat Flour. We notice that the Bull-Meat Flour is not put up in the regular way. It is in a plain keg without any of your labels upon it. We are suspicious about its genuineness. Do you ever ship Bull-Meat Flour in this way? As yet we have not opened the package to test it.

Ans.—You can rest assured that you have not received our goods and you should return them at once. We never pack goods of ours of any description except in our well known packages with labels on the outside and circulars inside. We never sell Bull-Meat-Brand Flour in any other manner than in red drums, which are familiar to you and the trade generally. These drums vary only in size, otherwise they are identical in every particular. They have our large label on the

head and our long label on the side, just as you see them illustrated in the cuts which you will find in our circulars and advertisements. You have received some substituted article which the shipper has sought to impose upon you with the hope that you would not question its genuineness. We leave to your own ideas of fairness as to just how such a firm should be regarded. Our goods are the first and genuine of their kind and have won great prestige among butchers all over the United States. Unscrupulous parties in trade seek to reap some advantage from our great reputation by substituting worthless preparations upon which they make a big profit. You should always be careful in ordering your goods to specify the article wanted and insist that the name of B. Heller & Co. shall be upon the package and that you will accept no other. Upon receiving the goods, you should always inspect the labels and see that they are ours. Do not be misled by similar names or packages resembling ours.

COMPLYING WITH FOOD LAWS IN CURING MEATS.

Query.—F. K. writes: "We should like to have you inform us what we can use in our state for curing meat and at the same time keep within the restrictions of the law. They have prosecuted butchers all over the state of Pennsylvania for using preservatives of some kinds, and it leaves everyone in the meat business at a loss to know what to do. We can't keep meat or cure it without using preservatives of some kind. What would you advise us to do?"

Ans.—We manufacture a preparation known as **Freeze-Em-Pickle,** which can be used for curing purposes and fully keep within the requirements of all food laws, both state and National, as well as laws of foreign countries. This article can be used in all kinds of sausage, fresh or dried. We guarantee that the use of this article will not in any manner conflict with the pure food laws of your state, and you are perfectly safe in using it. Its uses are so various that it would be impossible for us to give full directions for using it within the limits of these columns, but we take pleasure in sending you a booklet which will give you all necessary instructions and much other valuable information.

B. HELLER & CO.

KEEPING CURED MEATS IN CELLARS DURING SUMMER.

Query.—We have not enough cooler room to cure meat during the summer time, and we want to know if there is any way we can keep cured meat in our cellar during June weather without it becoming too salty.

Ans.—Even if you cure the meat in the winter and keep the cooler at a proper temperature and then leave the meat in the brine during the summer, the brine will turn sour, or become ropy, or thick, and will spoil the meat. To store meat in brine, it is absolutely necessary to keep it at a very low temperature. In fact, it is necessary to have an ice machine to keep the temperature in the cooler or storage room as low as 30 degrees. You could get it as low as 28 degrees. The meat would not freeze, but by having the temperature so low, the meat would not take on any more salt. You seem to be of the opinion that if the pickle on the meat were reduced you could keep the meat in the brine and keep it in a warm temperature. That would be impossible. Of course, having the brine weaker, it would not cause the meat to become so salty, but nevertheless, the brine would spoil, and it would then spoil the meat. To store meat in brine it is absolutely necessary to have the proper facilities and that means an ice machine. Our advice is that you cure enough meat during the winter according to the **Freeze-Em-Pickle** process to carry you until the middle or end of May, and then about the first of May begin curing some more meat in your regular cooler where the temperature is low enough so that the meat will cure properly.

STRONG LARD FROM BOARS.

Query.—J. A. S. writes: "I have rendered 100 lbs. of lard made as follows: 75 lbs. from fat barrows, 25 lbs. from fat boars. I find that the lard is strong. Can you give me the cause of it?"

Ans.—The odor from boar fat is so strong that such fat should not be used in first grade lard. Boar fat will only make a second grade of lard. We advise that you always keep it separate and sell it at a discount as a second grade of lard to bakers. The strong boar odor cannot be removed from the lard and the only thing that can be done is to whiten and purify it. In future render your barrow fat and boar fat separately.

TO MAKE HEAD CHEESE AND NEW ENGLAND HAM SOLID.

Query.—M. B. asks: "What is the best thing for making head cheese and New England ham solid and sticky without putting hog rinds in it?"

Ans.—To make Head Cheese sticky and solid without putting hog rinds in it, use Bull-Meat-Brand Flour, putting from ten to twelve pounds of Bull-Meat-Brand Flour into 100 pounds of meat. This will make a firm, solid Head Cheese, filling all the holes with a jelly. Bull-Meat-Brand Flour is the greatest and best known binder for Head Cheese and other sausages that butchers can use.

If you desire your New England ham to be more sticky, you must take your pork trimmings and cut them about the size of an egg and mix with every 100 pounds of meat 1 pound of our **Freeze-Em-Pickle,** but do not put any salt with them whatsoever. Let the meat stand in the cooler for a week and you will find that the water in the meat will have been thickened like glue and be sticky. Then take the meat out of the cooler; add 1½ pounds of salt to 100 pounds of meat, and season with Zanzibar Brand Seasoning. Take a small quantity of this meat and grind it very fine and then mix the fine with the coarse pieces and stuff it. Cook it very carefully with slow heat, then put it in the cooler in a press or put boards on it and press it down with stones. Your New England Pressed Ham is then finished. Of course, in the cooking water you can use some Zanzibar Carbon, so as to color the casings.

HOW TO PREVENT MOULD ON SAUSAGE, HAMS AND BACON.

Query.—L. B. writes: "Will you please let me know if there is anything to prevent the moulding of summer sausage, hams and bacon?"

Ans.—It is first necessary that you hang the sausage and meat in a dry, cool room. If you keep it in a room where the air is moist, it will mould rapidly. If lard is rubbed on the sausage and also the meat, it will aid materially in preventing moulding. When so used, it should be applied with a cloth and rubbed on both the meat and the skin side. If your meat has already begun to mould, it should first be washed with warm water and then permitted to dry for a few hours. When dry apply a little of the lard with a cloth.

SHARPENING KNIVES AND PLATES OF MEAT GRINDERS.

Query.—F. W. F. Co. asks how to sharpen knives and plates of meat grinders.

Ans.—If the plates are grooved and rough, it will be necessary to have them turned off in a lathe. Then the knives should be sharpened on the cutting-edge just like a scissors. We do not mean the flat side which runs against the plate. But if the knife is also rough on the flat side, then the flat side should be smoothed off a little on a grindstone, and after the plate is turned down the knife should be ground with emery and oil right on the plate to make a tight fit. If you have no lathe, it will have to be done in a machine shop, and in that event we would advise you to get into touch with some of the large concerns which supply butchers' cutlery, etc. We would be pleased to give you the names of some very good firms if you desire.

HOW TO CURE MEAT FROM FARM-KILLED HOGS.

Query.—C. A. J. writes: I have more or less trouble in curing hams from farmer killed hogs. The trouble I have is in the marrow. Would you please tell me the best way for farmers to kill and chill hogs and how is best to cure such meat?

Ans.—We take pleasure in sending you by mail under separate cover, our book, "Secrets of Meat Curing and Sausage Making." This book will give you all needed information with reference to meat curing and sausage making. You should study this carefully because it gives you the needed information for handling the meat before it is put in brine and during the time it is in the brine. It tells you how to pump the meats; how to make the brine for pumping; when to overhaul the meat; the temperature to cure in, etc. If you will follow all information given in these articles you will overcome the trouble you have had. You should also use **Freeze-Em-Pickle** for curing because by its use you will be able to turn out the finest mild-cured sweet pickled meats having a most delicious flavor, of good appearance. Moreover you would have a uniform cure and no loss from sour meats. You say that you have had trouble from hams souring at the marrow. Read carefully our article relating to the pumping of meats. By pumping you will overcome the souring at the marrow.

CAUSE OF FAILURE IN CURING MEATS.

Query.—H. B. writes: I have been trying to cure corned beef, but it has a very funny taste. If you can tell me what is the trouble and how to avoid it I will be greatly obliged. I boil the water for making it into brine and use refrigerated meats. I thoroughly cleaned the barrel with scalding hot water. I did not cure the meat in a cooler, but in a room where the temperature runs from sixty to sixty-five degrees. The brine was seventy degrees strength, according to the pickle-tester. I did not use either sugar or molasses in the brine. The curing is a failure. Will you please give me all the information you can?

Ans.—Your questions are their own answers. It is impossible to cure Corned Beef or any other kind of meat in a room where the temperature is as high as 60 degrees. It should not be higher than 45 degrees, and 40 degrees will be much better.

We refer you to our directions for curing Corned Beef in our book, "Secrets of Meat Curing and Sausage Making."

The directions contained therein should always be followed to the letter, if good results are desired, and when they are followed you will turn out the very finest Corned Beef; it will be in perfect condition and have the sweet taste so much desired. The brine for 100 pounds of meat should be made as follows: 8 pounds of common salt, 1 pound of **Freeze-Em-Pickle**, 2 pounds of granulated sugar and 5 gallons of cold water. The meat should be cured in this brine ten to fifteen days, according to the weight and thickness of the pieces. Use only fresh meats that have been thoroughly chilled.

LARDING NEEDLES—HOW USED.

Query.—F. P. C. writes: What are larding needles used for? I would like to receive a copy of your book.

Ans.—A larding needle is used for drawing fine or thin strips of bacon through beef tenderloins and other kinds of meat. Frequently small strips of dry salt pork are drawn through beef tenderloins, also through meat to be roasted. This makes the meat nice and juicy and also imparts to it a fine flavor. The strips which are to be drawn through the meat are cut very thin and usually square. They are about ⅛ to 3-32 of an inch in thickness.

B. HELLER & CO.

WHY COOLER "SWEATS."

Query.—F. B. writes: "I would like a little information in regard to my cooler. In sultry weather it sweats terribly, almost changing its natural finish to white and the sweat rolls down from it. If you can give me any information as to how I can stop it, I will be very thankful to you. The inside of the cooler is perfectly dry; in fact, I could strike a match in it anywhere. Kindly let me know if there is any way of preventing this trouble."

Ans.—The trouble with your cooler is no doubt due to the moisture of the atmosphere and to some imperfection in insulation. The defect can be remedied by the manufacturers. You say the cooler is perfectly dry inside, therefore, its construction must be very good; but the outside insulation is not just right, so the outside becomes too cool and the moist air coming in contact with the cold surface readily condenses. If the cooler can be insulated in such a way that the outside will not become so cold, we have no doubt your trouble can be overcome.

LEGALITY OF WHITE BERLINER BRAND KONSERVIRUNGS-SALZE.

Query.—O. B. writes: "We notice in the Scientific Meat Industry that you claim White Berliner Konservirungs-Salze can be used as a preservative for meats and keep within the requirements of the food laws of Pennsylvania. We wish to inquire whether one is perfectly safe in using this preparation as a preservative in Pennsylvania. Of course it is well understood that butchers must use a preservative of some kind, but they are interpreting the law in this state very strictly. Please let us hear from you fully in regard to this."

Ans.—White Berliner Konservirungs-Salze, when used in the proportion of four to eight ounces to each 100 lbs. of meat, complies with the pure food laws of Pennsylvania. No one need hesitate to use it for all the purposes for which we have recommended it in these columns, as there would be no grounds for action against anyone for its use. It is perfectly harmless and is everywhere recognized as such. No objection has been made against its use. We advise all butchers in Pennsylvania to make use of this preparation, as it will fully meet their requirements and absolve them from prosecution for the use of a meat perservative.

CHICAGO, U. S. A.

ANTISEPTIC PRESERVATIVES ARE PROHIBITED—RICE FLOUR.

Query.—B., R., S. & Co.: Please send us by express one 5-pound bottle of your Freeze-Em for fresh meat. Will send check on receipt of same. P. S.—Send us prices on your rice flour.

Ans.—Replying to your esteemed favor ordering 5 lbs. **Freeze-Em,** for use on fresh meat, we beg to say that under the circumstances we will not make the shipment until we hear further from you. Under your state food law, you are not allowed to use any antiseptic preservative on fresh meats or meat food products to keep them in a fresh condition. **Freeze-Em** was formerly largely used for this purpose, but in your state and a number of other states a preservative of this kind is now prohibited and we only sell **Freeze-Em** for the purpose of sterilizing chopping blocks, ice boxes, etc., as per labels which we enclose. We would advise you against any other use of **Freeze-Em** in your state, as the penalties for violation of the law are so severe and any preservative which will keep fresh cuts in a fresh condition would come under the ban of this feature of your state food law. **Freeze-Em-Pickle** would be perfectly legal for you to use in your state and for many of the purposes for which **Freeze-Em** and similar preparations were formerly used, it is even better than **Freeze-Em.** The enclosed circular will explain some of the purposes for which **Freeze-Em-Pickle** is used. If there is any other information concerning the matter which you may desire, we will be glad to write you fully in answer to your inquiry. We do not handle a rice flour. We manufacture Bull-Meat-Brand Flour, which is unquestionably the finest Sausage Binder on the market today. It is used to absorb the meat juices in the sausage and by retaining these the flavor and richness of the meat are preserved and make a better sausage in every way than when it is not used. We enclose a circular which gives you further information, and shall be pleased to have your order, for we know you will like it when you try it.

SOUR HAMS—HOW TO PREVENT.

Query.—F. B. writes: "Have you any chemical compounds that will help us to take care of some sour hams? We have some hams that are just a little sour and thought perhaps you would help us in the matter."

Ans.—We do not prepare anything which would help you in the least. The trouble arises from imperfect curing and the only time that we could have been of help to you would have been when you commenced to put the hams in the pickle; we could have then given you full instructions for pickling the hams in such a way that they could not have soured. In nearly all cases the souring is around the bone. In your case it is best to cut out the bone and trim away the sour meat. After being thus carefully trimmed, they can be rolled, tied and sold for boned hams. You can always avoid the danger of sour hams by exercising extreme care in properly chilling the meat before curing. Most all souring arises from the fact that the meat is not chilled through to the bone. If all the animal heat is thoroughly removed before curing, the hams will come out of the pickle cured all the way through.

If you will follow closely the directions contained to our book, "Secrets of Meat Curing and Sausage Making," you will never have trouble with your hams. We take great pleasure in sending you a copy of this book free of charge.

WHY I. X. L. PRESERVATIVE SHOULD NOT BE USED.

Query.—K. C. Co.: Kindly enter our order and send us as soon as possible five 50-pound kegs I. X. L. preservative.

Ans.:—In reply to your esteemed favor of recent date, ordering 5-50 lb. kegs I. X. L. we beg to say that we have withdrawn this preparation from the market for the reason that such a preservative would not now be permitted in many of the states owing to the food laws which have gone into effect. Otherwise we would be glad to give this order our immediate attention. In this connection we wish to call your attention to our **Freeze-Em-Pickle,** which does comply with all the food laws and which you may sell without any fear of either your firm or your customers getting into any

trouble. **Freeze-Em-Pickle** is now one of the very few articles which the butcher may use and absolutely comply with all the food laws, and for that reason is an article which you ought to use in every way possible. **Freeze-Em-Pickle** contains none of the ingredients ruled against by the various food laws. All preservatives containing antiseptic agents of any kind are prohibited under these various food and National laws, but not so with **Freeze-Em-Pickle.** We wish to further add that we now sell **Freeze-Em** only for disinfectant purposes, as per enclosed label. We do not send out any other directions for its use, because it would also be illegal for use as a preservative in meat or meat food products, just the same as I. X. L. **Freeze-Em,** as you know, has always been sold by us for use as a disinfectant as well as for the purpose of preserving fresh meats and meat food products. It is an antiseptic agent and while the active ingredients of **Freeze-Em** have always been considered harmless, yet under the present food laws, the use of all antiseptic agents for the purpose of preserving meat or meat products is prohibited and we strongly advise all of our customers to comply in every way with the Pure Food Laws. We so notify butchers and others who order direct from us because all that class of preservatives which are intended to keep fresh meat in a fresh condition on account of their antiseptic action are now prohibited and detection is an easy matter. Prosecutions and fines are sure to follow the use of all such classes of preparations in a short time, and such prosecutions would be of great injury to any butcher owing to the undesirable publicity the case would have. White and Red Konservirungs-Salze also comply with the various state food laws, because they each contain no antiseptic or other prohibited ingredients. Hope you will change your order for I. X. L. and use **Freeze-Em-Pickle** in its stead.

USE OF FREEZE-EM AS A PRESERVATIVE ILLEGAL.

Query.—P. C. N.: Will you send me one bottle of Freeze-Em at once, as I am entirely out?

Ans.—We are in receipt of your esteemed order of recent date for one bottle of **Freeze-Em.** Before making shipment we wish to call your attention to the

fact that your new state food law, which became effective on the first of this year, prohibits the use of **Freeze-Em** or any other antiseptic article as a preservative in meats or meat food products. We now sell **Freeze-Em** only for the purposes mentioned on the label with which we label all **Freeze-Em** leaving our factory and one of which we enclose. **Freeze-Em** having been formerly used as a preservative, as well as a disinfectant, we thought it best to write you and tell you just how the law affects the use of this class of articles when used as a preservative for meats and meat food products. If you wish to use something to assist you in making sausage, corned beef, etc., we would strongly recommend that you use **Freeze-Em-Pickle.** This is an entirely different preparation, and its use is perfectly legal and legitimate under the regulations of all food laws. It contains none of the agents which are prohibited under the food laws, and meat cured with it or sausage prepared by its use will therefore comply with these various state food laws.

Freeze-Em-Pickle does not work quite so rapidly as **Freeze-Em** in some respects and it takes a little more attention to details in its use than for **Freeze-Em.** However, it is legal for you to use and by its use the finest of goods will be made, having the best appearance and taste and excellent eating qualities. You should follow the directions closely, however, to accomplish these results. We enclose herewith directions for making brine for corned beef and for making the finest Bologna and Frankfort sausage without artificial color or preservative and to comply with all the food laws. We invite your particular attention to these directions, and also to the circular we enclose giving directions for the use of **Freeze-Em-Pickle** for making Hamburg Steak and Pork Sausage. Also for keeping sausage in hot weather. We thought best not to make any shipment to you under the circumstances until we heard from you further. We will be glad to have your order for **Freeze-Em-Pickle**, and we are sure that you will be well pleased with the results.

USE OF COLD STORINE ILLEGAL.

Query.—F. A. W.: Please ship at once 100 pounds Bull-Meat Flour and 10 pounds Cold Storine.

Ans.—Your favor of the 17th inst. received and we will make prompt shipment of the 100-lb. keg Bull-Meat-Brand Flour. We beg to advise that we have withdrawn Cold Storine from the market, hence, will not make shipment of that part of your order. Our reason for withdrawing this product from the market is because Cold Storine is an antiseptic preservative, and the use or sale of antiseptic preservatives for meat is unlawful in this state under the new Illinois Pure Food Law.

We would suggest that you use, instead of Cold Storine, our **Freeze-Em-Pickle,** which contains nothing the use of which would be contrary to the new state food law. It is, of course, a little more trouble to use **Freeze-Em-Pickle** than to use Cold Storine or other antiseptic preservatives, and it requires closer attention to details. However, it will well repay you for the time and trouble given to the matter because your finished products will have a fine appearance, excellent flavor and will comply in every way with the new state pure food law. We enclose directions for making corned beef and preparing trimmings for making Bologna and Frankfort Sausage, from which you will see the general method of using **Freeze-Em-Pickle** for the purposes named. **Freeze-Em-Pickle** is also of great assistance in curing hams, bacon, shoulders, etc., and can also be used to great advantage in making your Pork Sausage, Hamburger Steak, etc. In fact, by adopting the proper method for its use and paying close attention to the smaller details, most of the results that were formerly accomplished with antiseptic preservatives can be accomplished by its use, and your finished products will comply in every way with the pure food laws.

We trust you will start to give **Freeze-Em-Pickle** a trial and we are sure that if you will do so you will be greatly pleased with the results.

FREEZE-EM AS MEAT PRESERVATIVE ILLEGAL.

Query.—J. L. & Co.: Please send us one bottle of Freeze-Em at once, and oblige, your truly.

Ans.—We thank you kindly for your order of 5 lbs. **Freeze-Em,** but before making this shipment, however, we thought best to write you, explaining that under your new state pure food law it would be illegal for you to use **Freeze-Em** as a preservative in or on meat or meat food products. We now sell **Freeze-Em** only for disinfecting and sterilizing purposes as explained on the label which we now use and which we enclose herewith. As you know, we formerly sold **Freeze-Em** for use not only as a disinfectant, but for use as a preservative on and in meat and meat food products as well. Your new state pure food law as well as the recently enacted laws on the subject in several of the other states, prohibit the use of all antiseptic preservatives in or on meats or meat food products, and since **Freeze-Em** is an antiseptic it falls under this heading. If you desire to use **Freeze-Em** as a disinfectant and sterilizing agent, we will, of course, be glad to make shipment of same to you; but if you expect to use it in your meat or meat food products we would advise you to use **Freeze-Em-Pickle** instead. **Freeze-Em-Pickle** is an entirely different preparation, as you perhaps are aware, and it does not come under the class of antiseptic preservatives which the new law prohibits. Its use is legal under the regulations of all the food laws, because it contains nothing which has been ruled against under any of these laws. The enclosed directions for curing meats and preparing meats for Bologna and Frankfort sausage will give you complete information as to the use of **Freeze-Em-Pickle.** Not being an antiseptic, it is of course different, and it must be properly used to secure good results. However, it will well repay you for the slight additional trouble of using **Freeze-Em-Pickle** according to these directions, because your goods will always be of good quality and appearance and they will comply strictly with your pure food laws. We ask that you kindly go over the directions which we enclose and let us hear from you, for we want you to try this method of making your sausage, whether you use **Freeze-Em** for disinfecting purposes or not. We will just hold your order for the **Freeze-Em** awaiting your reply.

COLORING SAUSAGE MEAT ARTIFICIALLY IS ILLEGAL.

Query.—J. R. B.: Will you send me a guarantee that your Rosaline for coloring sausage, etc., will stand the Pure Food Law? Also state particulars of Potato Flour, and whether it is guaranteed or not to be pure. I want to use the goods, and the house I deal with won't guarantee them to me.

Ans.—In reply to your inquiry we beg to say that Rosaline for coloring bologna or other sausage would not be legal under your state law. However, you can produce even a better sausage, both in appearance and taste, by using **Freeze-Em-Pickle** according to the directions given in the enclosed circular, "A New Way to Make Bologna and Frankfort Sausage." **Freeze-Em-Pickle** is legal in your state as well as all other states, as it does not contain any ingredient that has been ruled against under any of the food laws. We would urge you to adopt this method of making your sausage, not only because it complies with your law, but because you will make better sausage and will save yourself from loss of the meat juices which would be lost if you made your sausage in the old way. As regards potato flour, we do not handle this product and are not interested in it. Bull-Meat-Brand Flour, our cereal sausage binder, is far superior to potato flour for this purpose, and it is legal in your state if used in the proportion of not to exceed 5 per cent, which will bind your sausage very nicely, and be greatly to your advantage. Bull-Meat-Brand Flour does not ferment. It is a pure and wholesome article of food in itself, it absorbs the juices and fats of the meat and retains them in the sausage when it is cooked, thus making a more palatable and more easily digested sausage than where no binder is used. Whenever a sausage in which a binder has been used is shipped out of the state, it is necessary to label the containor to show that a binder was used, in order to comply with the National Meat Inspection law, which controls the interstate shipment of all meat food products. **Freeze-Em-Pickle** and Bull-Meat Flour are guaranteed by us under the National Pure Food Law and every package of these preparations which leave our factory carry a label to this effect, with our serial number. Unless these preparations complied with the National Pure Food Law,

we could not afford to put this guarantee on the package. You will find **Freeze-Em-Pickle** a very valuable aid to you for other purposes than for making your Bologna, Frankfort and other sausage. By its use you can make very fine hams, breakfast bacon, shoulders, corned beef, etc. If there are any other questions you would like to ask, we shall be pleased to have you write us, and we hope you will order a case of **Freeze-Em-Pickle** and a barrel of Bull-Meat-Brand Flour, as their use will quickly convince you that you cannot afford to do business without them.

WHITENING AND PURIFYING TALLOW.

Query.—Messrs. S. B. write: "We render our tallow and other slaughter house offal all together in the regular tanks, and we would like to inquire whether you have anything that will whiten it after it is rendered."

Ans.—You can treat the tallow and whiten and purify it after you have rendered it in the regular manner in your tank if you are willing to go to the additional labor of treating it in your open jacket kettle. The proper way to do is to fill your open jacket kettle or caldron, whichever you may use, about one-third full of hot water; dissolve in this a one-pound package of our Lard and Tallow Purifier, then on top of this put the tallow after you have rendered it. It will make no difference whether the tallow is hot or whether it is cold. Get the water boiling hot; stir the water and the tallow frequently, about two minutes each time. This stirring should be at intervals of about five minutes for from fifteen to twenty minutes; then turn off the heat and permit the tallow to settle; next skim off the tallow from the top. More tallow can be treated in the same solution in the same manner; in fact, you can use the same solution in the jacket kettle two or three times. It should then be renewed with a fresh solution because the water will become impure, as the impurities of the tallow remain in the water and contaminate it; while in this condition the Tallow and Lard Purifier will exhaust its strength. Of course, more Lard and Tallow Purifier could be added to the same solution, but it is advisable to change the water occasionally as it will aid materially in purifying the tallow.

FREEZE-EM PICKLE USED FOR BOLOGNA.

Query.—R. B. K.: Will you kindly send us directions for using Freeze-Em Pickle for bologna? How do you use it where you have all fresh meat for making bologna? We have been using Rosaline for inside color; will it pass our pure food law? Can Freeze-Em be used with Red and White Konservirungs-Salze? An early reply will greatly oblige.

Ans.—We are in receipt of your letter asking for directions for using **Freeze-Em-Pickle** for bologna, and we take pleasure in enclosing the directions herewith. You say you have been using Rosaline for inside color. It will not pass your pure food law. The use of an inside color like Rosaline has been ruled out. That is why we got up a method of using **Freeze-Em-Pickle,** so that you can produce a fine red color on the inside of Bologna and Frankfort sausage without using an artificial color like Rosaline. We ask you to try these special directions and you will be surprised at the very fine Bologna and Frankfort sausage that can be turned out by following our methods and using **Freeze-Em-Pickle.** You ask whether **Freeze-Em** can be used with White and Red Konservirungs Salze. **Freeze-Em** is not legal to use in your state as a meat preservative. We advise you to not use it for that purpose. We sell it now only for disinfecting purposes, and we enclose a circular herewith showing how to use it for that purpose. Red and White Konservirungs-Salze, as made by us now, comply with all the regulations made under all the food laws in this country, and contain no ingredients that have been ruled against by any of the State Food Laws or the National Pure Food Law. If you require any further information in regard to the use of our goods, do not hesitate to write us. We are very glad to hear from you at any time, and we want to assist you in producing the best kinds of meat and sausage that comply with the pure food laws. We are in a position to be of much benefit to you in that respect. We will be pleased to hear from you at any time.

HOW TO GIVE A BRIGHT, RED COLOR TO BOLOGNA AND FRANKFORT SAUSAGE WITHOUT ARTIFICIAL COLORING.

Query.—I am trying to make Bologna and Frankfort sausage, and make it all right except the color of the meat. I cannot get a nice pink color.. I have tried Freeze-Em Pickle; it is all right, but it is too slow a process. I want to make my sausage out of fresh meat and smoke it in a smoke-house, but cannot get a nice pink color on the meat. It has a gray color and does not look right. I have a color on hand, but it don't give satisfaction. It makes the meat too red and does not look good.

Now, if you have anything that will overcome my trouble and will give my sausage a nice pink color, not red, and will comply with the National Pure Food Law, send it right along. I will remit on arrival. I would send the money now, but do not know the value of it. I make about twenty-five pounds of sausage at a batch.

Ans.—Your letter of recent date received. You say you are trying to make bologna and that you make it all right, but that the color of the meat is not a nice pink color. You say you tried the **Freeze-Em-Pickle** and that it worked all right, but that it is too slow a process. You further say you want to make your bologna out of fresh meat, but that you do not get a nice pink color when it is made that way. You say the meat is gray.

In all of that you are correct, and you will always have a gray sausage unless you make it with **Freeze-Em-Pickle** according to the directions in our circular. If you make bologna sausage out of fresh meat, it, of course, will be gray. If you roast a piece of beef, it will be gray. If you cook a piece of beef, it will be gray. It is the same with bologna. When bologna is made with fresh meat, it will be gray, just as though you take a piece of fresh meat and boil it. It is impossible to make bologna with a pink color and make it out of fresh meat. For that reason, we recommend you to use **Freeze-Em-Pickle** and prepare your bologna meat with **Freeze-Em-Pickle** beforehand. You can do that in about two or three days. It is better, however, to let the meat cure for a week.

All you have to do is to trim out the beef and pork trimmings with which you intend to make the bologna, cut the pieces up about the size of an English walnut and sprinkle on **Freeze-Em-Pickle** in the proportion of one pound **Freeze-Em-Pickle** to every 100 pounds of meat. Mix the meat thoroughly and then

pack it tightly in a tierce or a box, in fact a shallow box where the meat is not very thick is better, but pack it in tightly, and then put it in the cooler and let it remain there for at least four or five days, or a week, if possible. Then when you make bologna, the bologna will be better in flavor, will be juicier, will have a fine red appearance, and will be perfect in all respects. This we positively guarantee.

If you want to make bologna and frankfort sausage properly and have it right in all respects, you must take the necessary time and prepare the meat accordingly.

Formerly when artificial colors could be used in bologna and frankfort sausage, then it was all right to make it out of fresh meat and use an artificial inside color, but now, however, the food laws are such that you cannot use an inside color and therefore it is necessary to make it according to the **Freeze-Em-Pickle** process and with our **Freeze-Em-Pickle.** Then you will have a nice pink color on the inside of your bologna and frankfort sausage. You say you have a color on hand but it does not give satisfaction. It is a good thing that it does not give satisfaction, because if you were to use it, you could be arrested and fined and it would cause you a great deal of trouble; in fact, your reputation might be ruined if your name got in the papers stating that you used coloring on the inside of your bologna and frankfort sausage, because the food laws prohibit that.

By using the **Freeze-Em-Pickle** process you will make sausage that will in every way comply with your state food law and will at the same time, have a fine inside color, and excellent flavor and splendid keeping qualities. This will overcome all the troubles you mention, and all that is necessary is for you to prepare your meats a few days before hand. In fact, you can prepare a quantity of the meat before hand and keep it and use it along as you need it, making up 25 pounds at a time whenever you wish to do so, and leave the balance until a later occasion. Meat will keep this way in a good cooler indefinitely. This is the only way we can recommend your making sausage that will comply with your law and at the same time have the color you desire. Of course, it is a little more trouble, but it is trouble that will well repay you, because your sausage will really be of better quality and it will make a much better appearance.

B. HELLER & CO.

WHY FREEZE-EM PICKLE SHOULD NOW BE USED INSTEAD OF FREEZE-EM.

Query.—B. M. B. writes: I have used your Freeze-Em for about ten years, with excellent satisfaction, and it would be foolish to think of changing, but I notice that you are advertising your Freeze-Em Pickle, and I wish to ask whether in your judgment Freeze-Em Pickle would be better for me to use than your Freeze-Em.

Ans.—Your letter received. Pleased to note you have used **Freeze-Em** for about ten years, with excellent satisfaction. You seem to be of the opinion that as **Freeze-Em** has given such excellent satisfaction, you do not care to change and begin using something else. In answer to this we wish to say that formerly it was all right for you to use **Freeze-Em,** because it is only of late years that a good many of the States have passed Pure Food Laws prohibiting the use of a preservative like **Freeze-Em** in meat. It was on account of these various Food Laws that we went to working in our laboratory on a preparation that would comply with all Food Laws in existence in this country, and preparation to contain no ingredients that would be objected to by any Food Commissioner. The result is, we were able to produce an article that works prefectly, and we named that article **Freeze-Em-Pickle.**

Freeze-Em-Pickle is made entirely different from **Freeze-Em.** It does not contain the same ingredients at all. It works differently, but nevertheless does the work perfectly.

As quite a few States object to the use of **Freeze-Em,** and as all the rules and regulations under the various Pure Food Laws permit the ingredients of which **Freeze-Em-Pickle** is composed, it certainly is to the advantage of every butcher to begin using **Freeze-Em-Pickle** at once. You, of course, are aware that every butcher needs an article to keep his fresh meat fresh and also for curing all kinds of meats, such as hams, bacon, corned beef, etc. **Freeze-Em-Pickle** does all this work and does it perfectly. This we guarantee, but the best part of all is, that a butcher can use **Freeze-Em-Pickle** and know he is complying with the rules and regulations under all Food Laws

in this country, and that he cannot get into trouble for using **Freeze-Em-Pickle.** Under the circumstances, we certainly recommend beginning the use of **Freeze-Em-Pickle** at once.

IS FREEZE-EM PICKLE LEGAL TO USE?

Query.—W. K. I am a butcher and sausage maker, and also cure a great many hams and bacon. I have used a good bit of your Freeze-Em-Pickle and am well pleased with it, and I wish to ask if it can be used with safety under the new pure food laws. That is, the new state food law. The man I have been getting Freeze-Em-Pickle from says "Yes" and the State's Attorney says "No," so I write you and would like to have you explain the situation, and oblige.

Ans.—Replying to your recent favor it affords us pleasure to advise you that **Freeze-Em-Pickle** does comply with the requirements of your new state food law, and that you need have no fears in continuing its use. In fact, **Freeze-Em-Pickle** complies with the requirements of all the state food laws, as well as with the regulations under the National Pure Food Law, and it is being used all over the U. S. It is evident that the State's Attorney confuses **Freeze-Em-Pickle** with the preservatives which are prohibited under your new state law. All antiseptic preservatives, for the purpose of keeping fresh meat fresh and meat food products in a fresh condition, are positively prohibited under your new state food law. **Freeze-Em-Pickle** does not come in this class. The ingredients of which **Freeze-Em-Pickle** is composed have not been ruled against by any of the pure food laws. We are pleased to hear your praise of **Freeze-Em-Pickle,** although this is the universal report we get when it is properly used. We enclose a circular concerning its use, which you may not have seen, and this will give you further information concerning the manufacture of Bologna and Frankfort Sausage, Corned Beef, etc. We also enclose circular concerning our Bull-Meat-Brand Flour, which is unquestionably the best flour now on the market. This also complies with the pure food law. So does our Vacuum Brand Garlic Compound and our Prepared Sausage Seasoning, and Red and White Konservirungs-Salt. We will be pleased to hear from you whenever we can be of further service to you.

SCORCHED TALLOW—HOW TO PURIFY.

Query.—C. F. writes: "Will your lard purifier whiten lard that has been scorched a little? If so, please send us a package for trial."

Ans.—You can secure our Lard Purifier from all first class jobbers. You will be able to purify the lard mentioned by dissolving ¼ pound of our Lard Purifier in 100 lbs. of water in your rendering kettle, and on top of this put 100 lbs. lard and warm it up to about 180 to 200 degrees. Stir the lard briskly and thoroughly for about one-half hour, and during this time keep the lard boiling. After you are through treating the lard, permit it to settle so that the solution of Lard Purifier and water will settle to the bottom; then, after the lard has settled for about four or five hours, skim off the lard from the top and it will be purified and whitened.

SPURIOUS IMITATION BULL-MEAT-FLOUR.

Query.—H. L. writes: How is it that supply houses that claim to be reputable are trying all the time to deceive me with inferior imitations? I ordered from——Bull-Meat Brand-Flour and I got something else. When it came one of my clerks opened up the goods and we started using it. It gave poor satisfaction and was just about to "register a kick" with you when I discovered that I had been imposed upon by the jobber.

Answer:—It is difficult to give a satisfactory answer to your question. Why dealers will send a butcher when he orders B. Heller & Co.'s Bull-Meat-Brand-Flour some inferior, worthless imitation is more than we can comprehend. Of course the dealer can make a greater one-time profit on handling the imitation, but as soon as the butcher discovers the fraud, he will go elsewhere and the dealer loses his trade. The unscrupulous salesman traveling for a questionable dealer does not see so far, nor does he care what happens. A good man and a wise salesman is honest enough with his customer to admit the truth at all times. Facts are stubborn things. An undisputable fact is that Bull-Meat-Brand-Flour has no equal. Any house that claims to have a Just-as-Good is misstating facts, and what is worse, they are doing it knowingly. Bull-Meat-Brand-Flour has been put to the supreme test by the American people. Our factory is taxed to the utmost to keep up with the demand. Is that not the best evidence of the merit of an article?

CHICAGO, U.S.A.

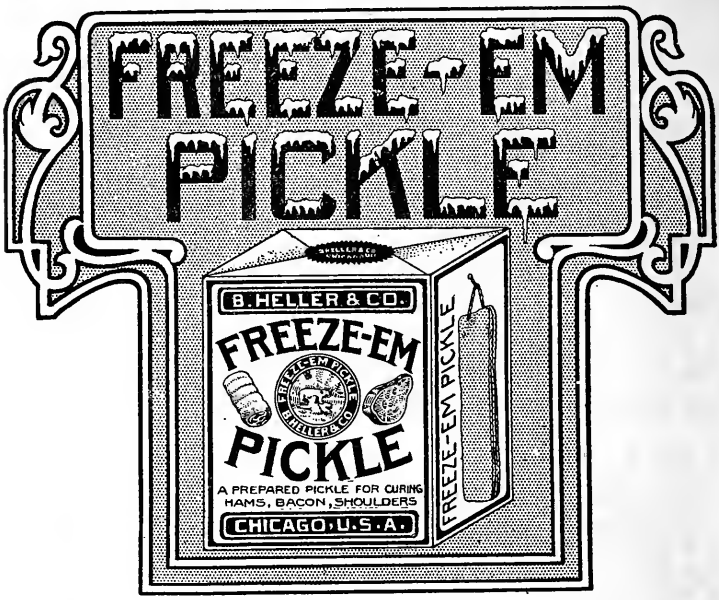
Our Guaranty

We guarantee that FREEZE-EM-PICKLE is composed of only such ingredients as are allowed by the regulations under all of the Pure Food Laws, and we guarantee that Meats cured by The Freeze-Em-Pickle Process will comply with the requirements of all existing Pure Food Laws. We also guarantee that Meats cured by The Freeze-Em-Pickle Process will have a better flavor, a milder and sweeter cure, and will not be as salty as Meats cured in the old way. Meats cured by The Freeze-Em-Pickle Process will positively be more palatable, better in taste and will give better satisfaction in every respect than Meats cured by any other method. Loss from spoiled or soured Meats treated by The Freeze-Em-Pickle Process will be unknown.

B. HELLER & CO. CHICAGO

B. Heller & Co.

B. HELLER & CO.



FREEZE-EM-PICKLE is a preparation for curing Hams, Shoulders, Bacon, Corned Beef, Dry Salt Meat, Pickled Pork and Meats for making Bologna and all other kinds of Sausage, etc. The Freeze-Em-Pickle Process prevents the fermentation and souring of Brine and gives a Delicious, Mild, Sweet Flavor, and cures it with a better color and more uniform cure than any other process known. By its use curing is made easy and anyone, without being experienced, can cure Meats with perfect success.

Curing Meats by the Freeze-Em-Pickle Process congeals the albumen in Meat so that it does not draw out into the brine; it thus keeps all the nutriment and flavor in the Meat and prevents it from drying up and hardening when fried or cooked, also from crumbling when sliced cold after being boiled.

CHICAGO, U.S.A.

Persons using the Freeze-Em-Pickle Process have an absolute guaranty in its use and can always depend upon getting good results. It possesses every advantage which the curer of meat has been seeking for many years, and it also fully complies with all State, National and Foreign Food Laws.

The Freeze-Em-Pickle Process of curing Meats gives a mild, sweet cure. Meats cured by it will not be too salty, but will have that peculiar sweet, sugar-cured flavor which is so much liked by everyone.

MAKING BOLOGNA AND FRANKFORT SAUSAGE.

The Freeze-Em-Pickle Process has no equal for preparing Meat for Bologna, Frankforts, etc. When the Meat for Bologna and Frankfort Sausage is prepared by this process, the sausage made will be of such superior quality as to readily sell at an advanced price.

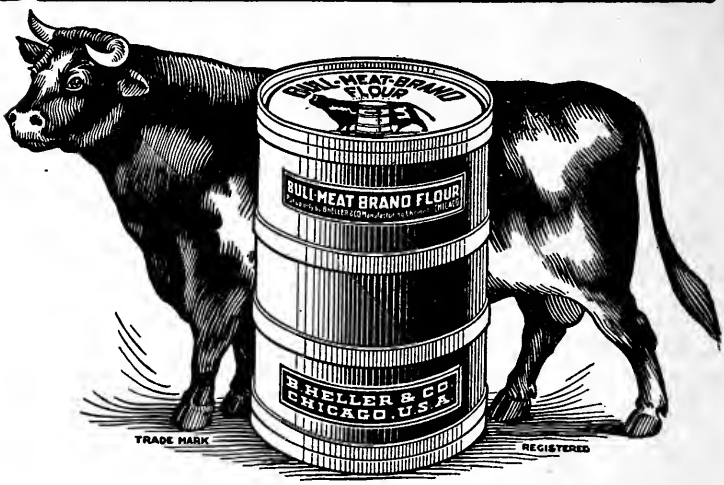
GUARANTY:—Freeze-Em-Pickle is guaranteed to comply with the National Pure Food Law, the National Meat Inspection Law and all State Pure Food Laws. Every package bears our guaranty with serial number attached and we absolutely guarantee that it can be legally used in all the States and Territories for curing meats.

FREEZE-EM-PICKLE is put up only in one pound packages as shown in above cut, and is packed 25, 50 and 100 pounds to the case, and is also packed in half barrels and barrels, at the following prices:

PRICE LIST

25 lb. Cases, per lb	$0.16
50 lb. Cases, per lb	.15
100 lb. Cases, per lb	.14
250 lb. Half-barrels, per lb	.13
500 lb. Barrels, per lb	.12

B. HELLER & CO.



BULL - MEAT - BRAND FLOUR

THE GREATEST BINDER AND ABSORBENT KNOWN FOR BOLOGNA, FRANKFORT, PORK SAUSAGE, ETC. IT PRODUCES A RICHNESS AND DELICACY IN ALL KIND OF SAUSAGE ENTIRELY DIFFERENT FROM SAUSAGE MADE WITH OTHER BINDERS.

All Sausage Makers who have made a test of Bull-Meat-Brand Flour acknowledge that it is the best Blender, Binder, Flavoring and Absorbent they have ever used for Bologna, Frankfort and Pork Sausage.

Bull-Meat-Brand Flour is a purely vegetable product and contains no added chemicals of any kind. It is made from the best of grain, and by a process of our own it is given those absorbing and binding qualities which make it superior as a binder to anything ever before placed on the market for this purpose. It has greater absorbing qualities than any other binder known; it adds to the nutritive qualities

of the meat by absorbing and retaining all the meat juices and fats when the sausage is cooked, which makes the sausage more juicy, more appetizing and more digestible.

Bull-Meat-Brand Flour does not dry out and become lumpy like other binders, but blends with the meat and fat. It is the only preparation that when used in Bologna and Frankforts will make them hold up and keep their bright, fresh appearance when cut and exposed on the counter.

Bull-Meat-Brand Flour greatly improves Pork Sausage. It absorbs the grease, so that when the sausage is fried it keeps all of the juice and fat of the meat within it, creating a most delicious and appetizing flavor, and also prevents the meat from shrinking while being cooked.

COMPLIES WITH THE PURE FOOD LAWS.

Bull-Meat-Brand Flour complies with the requirements of all Food Laws. Being a wholesome and nutritious article of food in itself, it improves the sausage in richness and flavor. We affix our Guaranty under the National Pure Food Law, with serial number attached, to every package of Bull-Meat-Brand Flour leaving our Factory, and we guarantee that it complies with all Pure Food Laws.

PRICE LIST

Prices F. O. B. Chicago and F. O. B. all jobbers' shipping points East of Rocky Mountains:

50 lb. Drums, per lb	**$0.05½**
100 lb. Drums, per lb	**.05**
275 lb. Barrels, per lb	**.04**
In 5 Barrel lots, per lb	**.03¾**

Prices F. O. B. jobbers' shipping points West of Rocky Mountains:

50 lb. Drums, per lb	**$0.06½**
100 lb. Drums, per lb	**.06**
275 lb. Barrels, per lb	**.05**
In 5 Barrel lots, per lb	**.04¾**

B. HELLER & CO.

IMPROVED ZANZIBAR CARBON

GIVES SAUSAGE CASINGS THAT BEAUTIFUL RICH SMOKE COLOR

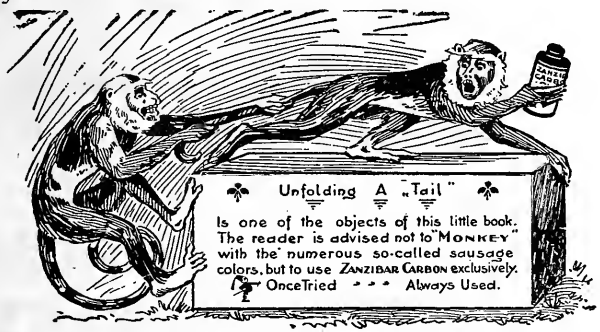
OUR GUARANTY.

IMPROVED ZANZIBAR CARBON IS GUARANTEED TO BE MADE FROM VEGETABLE COLORING MATTER AND COLORS PERMITTED IN THE RULINGS MADE UNDER THE NATIONAL PURE FOOD LAW TO BE USED IN CANDY AT THE TIME THIS BOOK GOES TO PRESS.

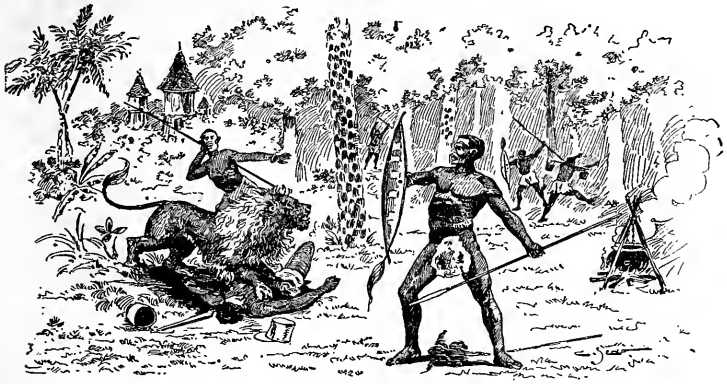
B. HELLER & CO.

CHICAGO, U.S.A.

DO NOT MONKEY with cheap substitutes and worthless imitations. If you prize your business and your reputation at all, it should be your aim always to obtain the best.



Improved Zanzibar Carbon is the only sausage color that has stood the test of users. We could a tale unfold indeed about spurious imitations. We do not want to. It is not business to run down our competitors simply because we alone have the genuine article. The fittest will survive.



NOTICE—As soon as we put a meritorious article upon the market unscrupulous parties attempt to imitate it in package and name. They cannot imitate its quality, but try to deceive the public by imitating our packages, labels and reading matter. Beware of all such imitations and always see to it that you get the genuine.

B. HELLER & CO.

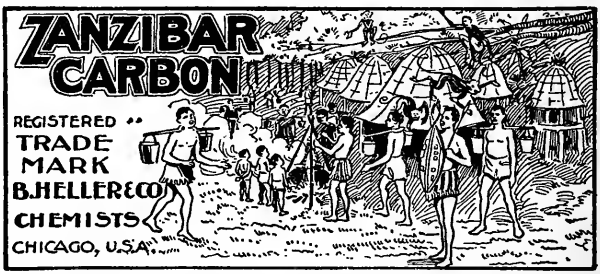
IMPORTANT!

EVERY CAN OF THE

IMPROVED ZANZIBAR CARBON

HAS THIS REGISTERED TRADE-MARK ON IT

DECISIONS OF THE COURTS give to B. Heller & Co. the sole and exclusive rights to this trade-mark. Any party counterfeiting, imitating or infringing upon the same will be prosecuted to the full extent of the law.



The genuine IMPROVED ZANZIBAR CARBON is sold in cans only, and not in bulk. Every can is sealed with a lead seal. The following is a facsimile of the seal we use for sealing all our ZANZIBAR CARBON cans.

Showing one side of lead seal

Showing other side of lead seal

We CAUTION EVERYONE never to buy it in bulk, or accept it if the can has been opened.

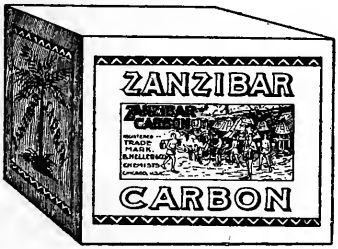
REMEMBER, all goods sold under a similar name, and in any other package than the one illustrated and described on the following page, are either an adulteration of IMPROVED ZANZIBAR CARBON or are worthless imitations of it and should be dealt with accordingly. It is needless to say that one always does better by buying the genuine than an imitation. The best recommendation that we can possibly have is the fact that so many are trying to imitate us.

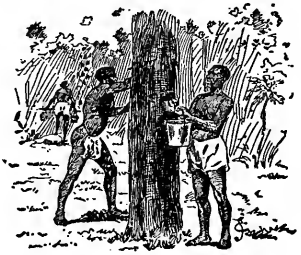
If our goods were not THE BEST others would not try to imitate them as well as our TRADE-MARK, labels and name.

CHICAGO, U.S.A.

Take the Genuine Article Only

When Buying ZANZIBAR CARBON please always see that the can is securely sealed to insure your getting the genuine article, and remember our IMPROVED ZANZIBAR CARBON is guaranteed to be made from Vegetable Coloring Matter and Colors permitted under the Rulings of the National Pure Food Law for coloring Candy.





Price List

IMPROVED ZANZIBAR CARBON

20 ounce cans, net weight, per can	$1.50
5 lb. cans, net weight, per lb.	1.00
10 lb. cans, net weight, per lb.	.95
25 lb. cans, net weight, per lb.	.90
50 lb. cans, net weight, per lb.	.85

B. HELLER & CO.

VACUUM BRAND GARLIC

Is a powder made from the very best selected garlic. The garlic is prepared, evaporated and dried by a process of our own which saves the free garlic oil and natural flavor. It is then powdered. When used in this powdered form to flavor sausage or any article of food, it is so thoroughly distributed in minute particles that it produces a more uniform and delicate flavor than can be obtained by using fresh garlic.

The use of fresh garlic requires considerable labor of a disagreeable character, and also taints the fingers and utensils with a lasting and offensive odor. Vacuum Brand Garlic enables one to use this delicious and desirable flavor without the many disagreeable objections to the use of fresh garlic.

Vacuum Brand Garlic will keep in any climate; it never deteriorates in strength or flavor; it never spoils; it is always ready for immediate use and is uniform in strength and flavor.

For flavoring Salami or Garlic Sausage and other foods, Vacuum Brand Garlic is much better than fresh garlic, because it does not undergo fermentation nor produce gases like fresh garlic.

WE GUARANTEE that Vacuum Brand Garlic Compound complies with the regulations under all the Pure Food Laws, and our guarantee under the National Pure Food Law, with serial number, is affixed to every package. It is made with the utmost regard to purity and cleanliness and contains no harmful or deleterious ingredients of any kind,

PRICE LIST

One pound cans	**per**	**pound,**	**35c**
Five pound cans	"	"	**30c**
Ten pound cans	"	"	**29c**
Twenty-five pound cans	"	"	**28c**
Fifty pound cans	"	"	**27c**
One hundred pound kegs	"	"	**26c**
Barrel lots	"	"	**25c**

CHICAGO, U.S.A.

B. HELLER & CO.'S
LARD AND TALLOW PURIFIER

This Purifier Whitens and Hardens Lard and Tallow. It neutralizes the free fatty acids, thereby preventing rancidity. By preventing the oil in the Lard from separating from the stearine during hot weather the Lard is kept firm.

This Purifier is the result of many years of practical experience in the refining of Lard and Tallow, and when properly used it will do the work every time.

GUARANTY.

We hereby guarantee that our Lard Purifier does not contain ingredients which have been ruled against by any of the Pure Food Laws. Every package bears our guaranty under the National Pure Food Law, with serial number attached.

PRICE LIST

Put up in 1-lb. packages, packed as follows:

15 lb. cases, per lb	$0.33
25 lb. cases, per lb	.33
50 lb. cases, per lb	.32½
2-50 lb. cases, 100 lbs	.32
3-50 lb. cases, 150 lbs	.31
10-50 lb. cases, 500 lbs	.30

B. HELLER & CO.

ZANZIBAR BRAND

PREPARED SEASONINGS

In order to make the Finest Sausage the Sausage Maker must use the Finest Seasonings. It pays to use the very best Seasoning that can be obtained.

Our Zanzibar Brand Sausage Seasonings cost a little more than the ordinary kind, but they are Absolutely the Finest that can be Produced.

The Formulas from which the Zanzibar Brand Sausage Seasonings are made are old Secret Formulas known only to our Family. These Formulas have been used in past Generations in our Family, and also by our Mr. Adolph Heller, while in the Packing and Sausage Business. The high Perfection of these Formulas has been brought about through the fifteen years of B. Heller & Co.'s experience as Expert and Consulting Packing House Chemists.

Zanzibar Brand Prepared Sausage Seasonings impart a Fine Flavor as well as a Delicious Aroma to all kinds of Sausage, which is entirely different from

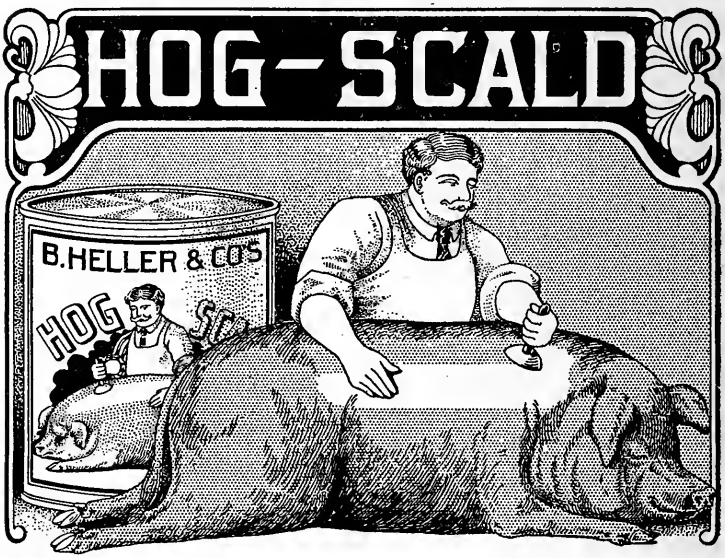
any other Seasonings. The ingredients used in the Zanzibar Brand Seasonings are only of the very Highest Quality obtainable, and the combination is one which imparts to Sausage a Zestful and Piquant Flavor entirely its own, which is very Delicious and Appetizing and one which is exceedingly pleasing to everyone. Zanzibar Brand Seasonings will positively increase anyone's Sausage Trade wherever used, because the Sausage Flavored with these Seasonings will have such a Fine Flavor as well as an Appetizing Aroma.

Owing to the Zanzibar Brand Seasonings being Absolutely Pure and free from adulterations, and of the Highest Strength obtainable, it is necessary to use only from one-quarter to one-half as much of the Zanzibar Brand Seasonings as of other prepared Seasonings or Spices. It therefore can be seen that our Zanzibar Brand Seasonings are Positively the Cheapest that can be used owing to the very small amount required to give the Sausage the Desired Flavor. Any Sausage Maker who will try these Seasonings will always use them, not only because they give such a Delicious Flavor to the Sausage, but also owing to the economy in their use.

We positively guarantee that Zanzibar Brand Seasonings will increase the Sausage Maker's Trade and will do all we claim for them. They are Guaranteed to be absolutely Pure and Free from any adulteration. Zanzibar Brand Seasonings are also Guaranteed to comply with the National Pure Food Law and all State Pure Food Laws.

PRICE LIST	300 lb. bbls.	100 lb. cans	50lb. cans	25lb. cans	10 lb. cans
Pork Sausage Seasoning.....	.21	.22½	.23	.24	.27½
Bologna and Smoke Sausage Seasoning.....	.21	.22½	.23	.24	.27½
Frankfort and Weiner Sausage Seasoning.....	.21	.22½	.23	.24	.27½
Liver Sausage and Head Cheese Seasoning.....	.21	.22½	.23	.24	.27½
Swedish Sausage Seasoning..	.21	.22½	.23	.24	.27½
Polish Sausage Seasoning....	.21	.22½	.23	.24	.27½
Summer Sausage Seasoning..	.21	.22½	.23	.24	.27½
Pickled Tongue and Pigs' Feet Seasoning.....	.21	.22½	.23	.24	.27½
Corned Beef Seasoning.....	.28	.30	.32	.33	.35
Hamburger Seasoning.....	.28	.30	.32	.33	.35
Mexican Sausage Seasoning	.45	.47	.49	.50	.55

B. HELLER & CO.



MAKES SCALDING EASY

REMOVES THE DIRT. CLEANSES THE HOG. WHITENS THE SKIN.

HOG-SCALD makes the hair come off easily, removes the dirt and filth and purifies and also softens the scalding water. It cleanses the skin, making it as white as snow. It is a great labor saver, as it assists materially in removing the hair and leaves the skin more yielding to the scraper. The skin of hogs is covered with a film of greasy filth, containing millions of germs, which are also down in the pores of the skin, and if not removed these will get into the brine when the meat is being cured, injuring both the meat and the brine. **HOG-SCALD** removes all this filth and bleaches the skin.

Those selling dressed hogs will find **HOG-SCALD** very valuable, as Hogs that have been scalded with it look whiter and much better. Hams and bacon after being smoked look much brighter and more appetizing from hogs that have been scalded with **HOG-SCALD.**

The use of **HOG-SCALD** is legal everywhere. It does not come under the regulations of the Food Laws, as it is a cleansing agent.

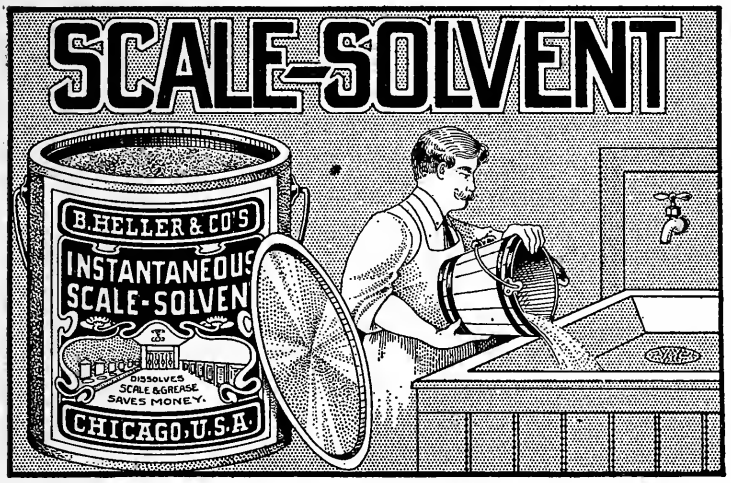
COSTS VERY LITTLE

At the low price we sell **HOG-SCALD** no one can afford to scald hogs without it.

PRICE LIST.

10-lb. cans	**per**	**pound,**	**15c**
60-lb. cases (½ doz. 10-lb. cans)	**"**	**"**	**12c**
120-lb. cases (1 doz. 10-lb. cans)	**"**	**"**	**11c**
240-lb. cases (2 doz. 10-lb. cans)	**"**	**"**	**10½c**
360-lb. cases (3 doz. 10-lb. cans)	**"**	**"**	**10c**

CHICAGO, U.S.A.



B. HELLER & CO.'S

INSTANTANEOUS

SCALE SOLVENT

DISSOLVES SCALE AND GREASE IN STOPPED-UP SINKS, SEWERS, KITCHEN DRAINS, WATER CLOSETS, URINALS, ETC.

Whenever a sewer or drain is stopped up, it is due to one of two things: Either it is stopped with grease, hair, pieces of wood, cloth, etc., or it is from the formation of scale. Scales very readily form in districts where the water contains a great deal of lime.

When a sewer is stopped up and cannot be opened by ordinary methods, a plumber must be sent for, which means a considerable expense. No matter what a sewer is stopped with, this Scale Solvent, if properly applied, will open the sewer in a few minutes.

In places where pipes clog up easily, when they are once thoroughly cleaned they can be kept free and open by flushing them once a month with a small quantity of this Scale Solvent.

This Scale Solvent positively will not affect any of the metals used in plumbing, such as iron, brass, copper, lead or porcelain ware.

PRICE LIST

10-lb. cans	**per can, $1.50**
20-lb. cans	**" " 2.75**

B. HELLER & CO.

FREEZE-EM DISINFECTANT

A VERY EFFICIENT DEODORIZER AND ANTI-SEPTIC FOR BUTCHERS' CHOPPING BLOCKS, ICE BOXES, SAUSAGE MACHINERY, CURING TANKS AND VATS, AND ALL OTHER MACHINERY AND UTENSILS USED BY THE BUTCHER AND SAUSAGE-MAKER.

THE ACTIVE PRINCIPLE OF FREEZE-EM IS A GAS WHICH IS GIVEN OFF WHEN THE POWDER BECOMES DAMP. THIS GAS IS A POWERFUL GERMICIDE AND DEODORIZER, AND CAN BE ADVANTAGEOUSLY USED IN MANY WAYS.

TO KEEP ICE BOXES SWEET

To keep an ice box pure and fresh, wash it occasionally with hot water in which a tablespoonful of Freeze-Em has been added to every gallon of water. Every evening before closing, sprinkle a tablespoonful of Freeze-Em on the floor of an ordinary size ice box. The Moisture in the box will soon liberate sufficient gas to purify the air in the box and keep the contents from molding and spoiling. By doing this every evening, meats and poultry of all kinds can be kept in an ice box without becoming moldy and slimy.

CHICAGO, U.S.A.

TO KEEP BLOCKS, PAILS, TUBS AND ALL BUTCHERS' AND SAUSAGE-MAKERS' TOOLS AND MACHINERY SWEET AND FRESH put a small quantity of Freeze-Em in the water in which they are washed. This will destroy the germs which cause slime and mold.

OLD BARRELS USED FOR CURING will not taint brine and meat if they are thoroughly washed, inside and outside, each time new brine is made, with hot water in which Freeze-Em has been dissolved.

NOTICE: Freeze-Em was originally sold not only for the purpose of disinfecting and deodorizing chopping blocks, butchers' utensils and machinery, etc., but was also largely used for Preserving Hamburger Steak, Pork Sausage, etc. The Food Commissioners in most States have ruled against its use in any meats or meat-food products. Therefore, we now only sell Freeze-Em for disinfecting and deodorizing purposes; and we caution all Butchers and Sausage-Makers who are located in States which prohibit the use of Antiseptic Preservatives, against using Freeze-Em in or on any meats or meat-food products. Freeze-Em is an Antiseptic and as such has a legitimate purpose; but where the use of Antiseptic Preservatives is prohibited in all meats and meat-food products, the use of Freeze-Em as a preservative in them would be a violation of the State Law and punishable with heavy fines. Therefore we warn those residing in such States to use Freeze-Em only for sterilizing and deodorizing their utensils and other equipment.

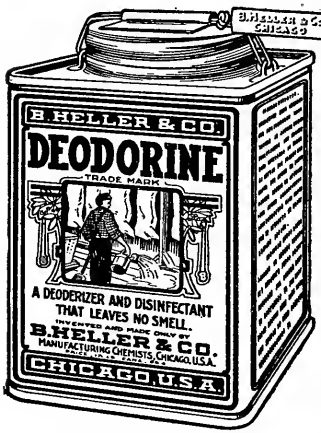
PRICE LIST

5 lb. bottles	per lb.,	50c
30 lbs. (½ doz. 5-lb. bottles)	"	48c
60 lbs. (1 doz. 5-lb. bottles)	"	46c
120 lbs. (2 doz. 5-lb. bottles)	"	44c
240 lbs. (⅓ gross 5-lb. bottles)	"	42c
360 lbs. (½ gross 5-lb. bottles)	"	41c
720 lbs. (1 gross 5-lb. bottles)	"	40c

B. HELLER & CO.

DEODORINE

Trade-Mark



THE DEODORIZER THAT LEAVES NO SMELL.

A Concentrated, Powerful and Harmless Deodorizing Disinfectant, for use in Packing Houses, Sausage Rooms, Coolers, Meat Markets, Fish Markets, Grocery Stores and other places where a Disinfectant is desired which does not give off any odor from itself but immediately Destroys any odor with which it comes in contact.

Deodorine produces a solution that will at once Destroy all Offensive Odors and will NOT leave any Odor of Itself. Most Deodorizers have an odor of their own, which in many instances is as offensive as the odor they are expected to remove. Such Deodorizers cannot be Used around Food Products, because of the smell which they impart to such articles. Not so with DEODORINE. It Destroys all Odors of Putrefaction, such odors as come from the entrails of Chickens, Fish, Game, etc., by Substituting Oxygen for the Foul Air coming from them.

Deodorine is Not in the least Caustic and will not injure any Metal, Wooden or Porcelain ware, neither will it injure or irritate the hands or other portions of the skin with which it comes in contact.

Deodorine can be used to Destroy the Offensive Odors arising from Urinals, Toilets, Cuspidors, etc. As soon as it is applied, the Odors are Destroyed.

Deodorine is very cheap to use. One teaspoonful makes two gallons of Very Strong Deodorizing Solution, suitable for Sprinkling Floors, Washing out Ice Boxes, Fish Boxes, Flushing Urinals, Toilets, etc. It is so cheap that it can be freely used, and it leaves the air in any room where it is used so Sweet and Pure that after a trial no Butcher or Fish Dealer will do without it.

Put up in 1½ pound cans. Price $1.00 each

CHICAGO, U.S.A.

THE PERFECT CLEANSING AGENT FOR PACKING HOUSES, SAUSAGE KITCHENS AND MEAT MARKETS

Ozo is an invaluable preparation for washing, cleansing and purifying all kinds of Packing House, Sausage Kitchen and Meat Market utensils, and for all purposes where a thoroughly effective cleansing agent is required.

The putrefaction and spoiling of meats are due to the action of bacteria. These Germs of putrefaction and decay thrive in everything of a filthy nature. Hence it is of the utmost importance that everything with which meats come in contact should be kept in a state of perfect cleanliness as otherwise the meat will become tainted. Butchers should wash their counters, chopping blocks, meat boxes, racks, knives, etc., with OZO. In fact, to insure absolute purity and cleanliness, the entire floors of Packing Houses, Slaughter Houses, Sausage Kitchens and Retail Markets should be frequently washed with it. It will keep everything in connection with meats free from bad odors and perfectly clean and pure. Washing barrels and vats in which meat has been cured, with OZO will destroy the germs which adhere to them, and therefore will prevent the new brine from spoiling.

OZO is beyond question the best, simplest and cheapest antiseptic preparation for combating the dangers and losses resulting from the decomposing activities of germ life. It is absolutely harmless and keeps everything with which it comes in contact clean and sweet.

OZO PRICE LIST.

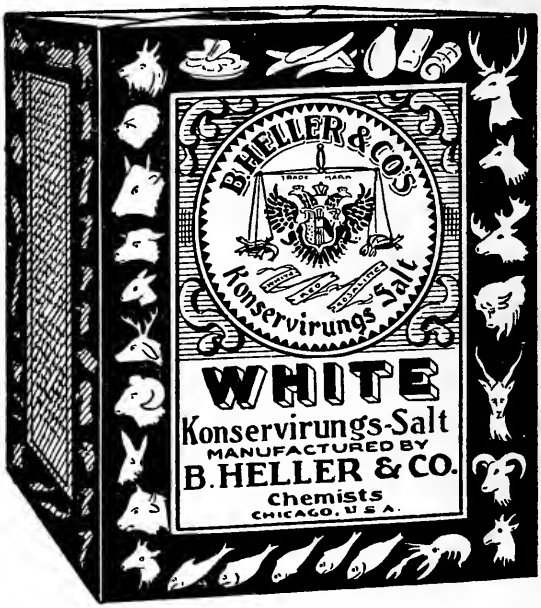
5-lb. boxes, per lb	**$0.10**
10-lb. boxes, per lb	**.09**
25-lb. kegs, per lb	**.08**
50-lb. kegs, per lb	**.07½**
100-lb. kegs, per lb	**.07**
300-lb. barrels, per lb	**.06**

B. HELLER & CO.

BERLINER BRAND

WHITE

KONSERVIRUNGS-SALT



This old and reliable preparation has stood the severest tests in all climates and under all conditions. It is guaranteed to conform to all the Pure Food Laws. It is especially adapted for curing Pork and Liver Sausage, Head Cheese Meat, Etc.

White Berliner Brand Konservirungs-Salt complies with the regulations under all the Food Laws, and our guaranty under the National Pure Food Law, with serial number, is affixed to every package.

PRICE LIST.

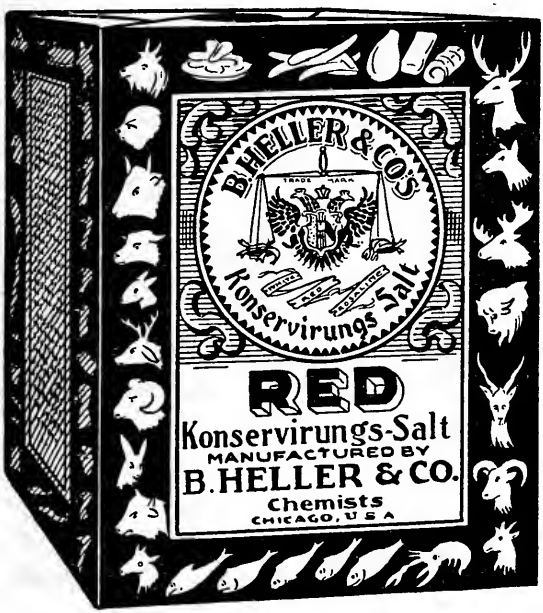
15 one-pound packages in case, per lb	**$0.27**
25 one-pound packages in case, per lb	**.27**
50 one-pound packages in case, per lb	**.27**
100 one-pound packages in case, per lb	**.27**
150 to 500 lb. lots, per lb	**.24**

CHICAGO U.S.A.

BERLINER BRAND

RED

KONSERVIRUNGS-SALT



This preparation is so well known to the trade that no description of its uses will be necessary. We are pleased, however, to add that Berliner Brand Red Konservirungs-Salt complies with the regulations under all the Pure Food Laws, and our guaranty under the National Pure Food Law, with serial number, is affixed to each package.

Full directions for curing Hams, Bacon, Tongues, Mess Pork, Corned Beef, Etc., are given on each package.

PRICE LIST.

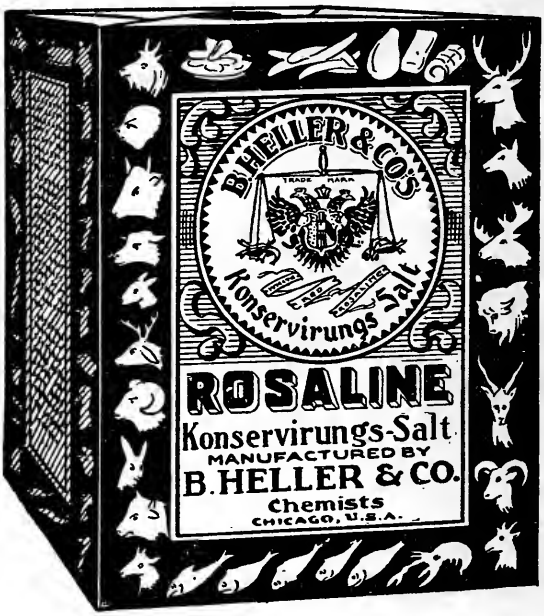
15 one-pound packages in case, per lb	**$0.27**
25 one-pound packages in case, per lb	**.27**
50 one-pound packages in case, per lb	**.27**
100 one-pound packages in case, per lb	**.27**
150 to 500 lb. lots, per lb	**.24**

B. HELLER & CO.

BERLINER BRAND

ROSALINE

KONSERVIRUNGS-SALT



Rosaline is used for coloring the inside of Bologna and Frankfort Sausage. In some States the use of an Artificial Color in Sausage is Prohibited. Some States permit the use of a Harmless Color, but in some States where the use of a Harmless Color in any Food Product is used, the Law requires that the Article of Food so Colored should be labeled "Artificially Colored."

The Coloring matter used in Rosaline is the same kind that is at present allowed to be used in Candy under the Rules and Regulations of the Pure Food Law.

For the benefit of the United States Inspected Packing Houses, we wish to say that at the time of going to press the present Rules and Regulations made under the Federal Meat Inspection Law, Artificial Colors in Sausage or Meat Food Products are Prohibited. However, Harmless Colors are permitted on Sausage Casings, under the rulings made under the Federal Meat Inspection Law.

PRICE LIST

15 one-pound packages in case, per lb	**$0.27**
25 one-pound packages in case, per lb	**.27**
50 one-pound packages in case, per lb	**.27**
100 one-pound packages in case, per lb	**.27**
150 to 500 lb. lots	**.24**

CHICAGO. U.S.A.

TANALINE

(TRADE-MARK)

A RELIABLE PREPARATION FOR TANNING SKINS FOR RUGS, ROBES, CLOAKS, OVERCOATS, ETC.

It thoroughly tans the skins and leaves them sweet and pliable. It is simple and easy to use, and enables anyone to tan the skins of all kinds of animals and make beautiful and useful furs and rugs at small expense.

Each package contains sufficient for thoroughly tanning the pelt of a good size Calf, large Dog, Wolf or Fox.

PUT UP ONLY IN TWO POUND CARTONS.
PRICE PER CARTON 50 CTS.

B. HELLER & CO.

RAT-BANE

A PLEASANT SUICIDE FOR RATS

Guaranteed to Exterminate Rats, Mice and other Rodents

Rat-Bane clears all premises of these miserable pests without leaving them in the house to die.

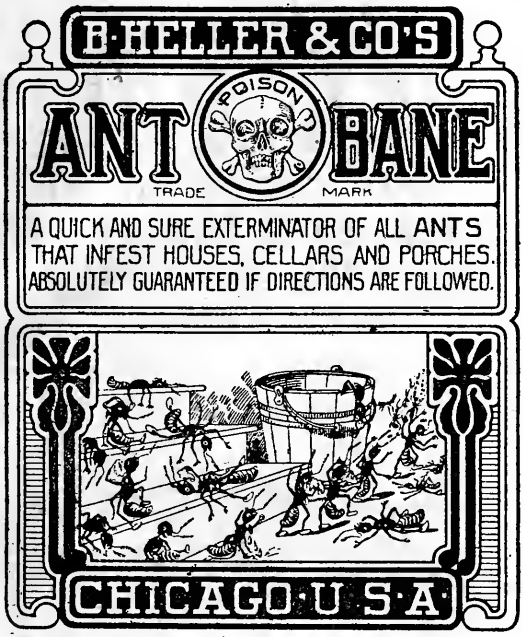
B. Heller & Co.'s Rat-Bane is the only sure and speedy remedy of its kind. It is easily applied and attracts the rats to their death. They like it, feast on it and leave the premises to die. It never fails to do its work.

PRICES

Full 1½ lb. Bottle	**$1.00**
One-half Dozen Full 1½ lb. Bottles	**5.00**
One Dozen Full 1½ lb. Bottles	**9.50**

HOUSES OF FAIR SIZE SHOULD ORDER NOT LESS THAN 6 BOTTLES.

CHICAGO, U. S. A.



ANT-BANE

A PLEASANT SUICIDE FOR ANTS

Guaranteed to Exterminate Red and Black Ants

Ant-Bane clears all premises of these miserable pests without leaving them in the house to die.

B. Heller & Co.'s Ant-Bane is the only sure and speedy remedy of its kind. It is easily applied and attracts ants to their death. They like it, they feast on it and leave the premises to die. It never fails to do its work.

PRICES

Put up only in full 1½ lb. Bottles, each $ 2.00
One-half dozen full 1½ lb. Bottles 10.00

B. HELLER & CO.

ROYAL
SILVER POLISH

A HIGH GRADE POLISH
FOR SILVER, GOLD AND ALL HIGHLY POLISHED METAL AND PLATED WARE

This Polish is manufactured especially for use on highly polished metal surfaces, whether plated or solid. It produces a very fine lustre, which will maintain its brilliancy much longer than when other polishes are used.

Royal Silver Polish is entirely free from Oil, Acid and Grit, which makes it especially valuable for polishing finely plated ware or articles made from solid Silver or Gold.

ROYAL SILVER POLISH IS VERY EASY TO USE AND VERY RAPID IN ITS ACTION. WHERE LARGE SURFACES OF HIGHLY POLISHED METAL ARE TO BE CLEANSED AND POLISHED IT HAS NO EQUAL. IT IS MORE ECONOMICAL THAN OTHER POLISHES, BECAUSE THE LUSTRE OBTAINED BY IT IS FINER AND MORE LASTING THAN WHEN OTHER POLISHES ARE USED.

PRICE

Put up in 1-lb. cans, each.....$0.25
1 doz. 1-lb. cans, per dozen..... 2.50

CHICAGO, U.S.A.

ROYAL
METAL POLISH

FOR CLEANING AND POLISHING

BRASS, COPPER, GERMAN SILVER, ZINC, TIN, ETC.

IT IS EASILY APPLIED AND QUICK IN RESULTS

Royal Metal Polish has no equal for cleansing and polishing Store Fixtures, Scales, Metal Trimmings, Ornaments, etc. It contains no Oil, Acid or Grit, and leaves a finer and more durable polish than anything else on the market.

AFTER ONE TRIAL NO BUTCHER WILL DO WITHOUT IT

PRICE

Put up in 1-lb. cans, each $0.25
1 doz. 1-lb. cans, per dozen 2.50

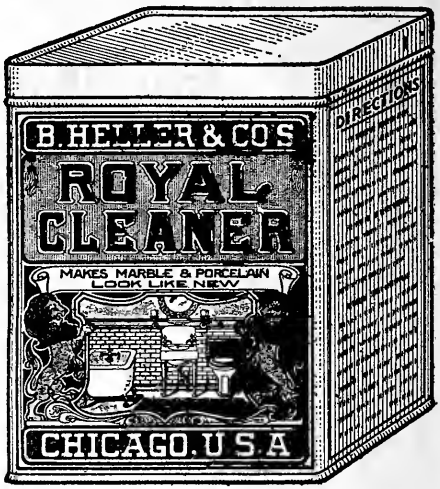
B. HELLER & CO.

ROYAL CLEANER

TRADE-MARK

MAKES MARBLE AND PORCELAIN LOOK LIKE NEW

Royal Cleaner quickly removes Grease, Scum and Stains from the surface of Marble, Porcelain and Enamel.



IT HAS NO EQUAL

for immediately cleaning and restoring the original color to Marble, Porcelain and Enamel Basins, Bath Tubs, Kitchen Sinks, Tiling, Etc.

ROYAL CLEANER DOES NOT SCRATCH OR OTHERWISE INJURE THE FINISH OF THE ARTICLES ON WHICH IT IS USED. IT IS EASILY AND QUICKLY APPLIED AND IS ALWAYS SATISFACTORY IN RESULTS.

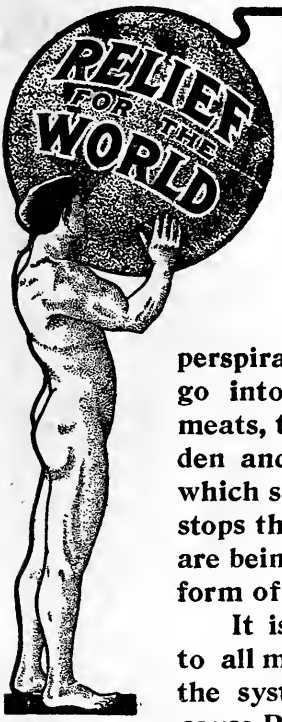
In localities where the water is very hard or contains a high percentage of Iron or Sulphur, Royal Cleaner is the only preparation that can be depended upon to keep Bowls, Basins and Bath Tubs free from stain and in an inviting condition. It saves labor and makes it possible to always keep such articles in a sightly and sanitary condition with very little expense.

PRICE

Put up in 1-lb. cans, each.....$0.25
1 doz. 1-lb. cans, per dozen..... 2.50

CHICAGO, U.S.A.

RHEUMATISM



Men engaged in the Meat Business are perhaps more subject to Rheumatism and Rheumatic Pains than any other class of men. This is because men working in Butcher Shops and around Meat Coolers generally work very hard, and a great deal of the time they are wet with perspiration. Consequently, when they go into the cooler or handle chilled meats, they subject their bodies to sudden and great changes in temperature, which suddenly checks perspiration and stops the elimination of poisons which are being carried out of the body in the form of sweat.

It is a matter of great importance to all men who are thus exposed to keep the system free from the poisons which cause Rheumatism and kindred diseases. Otherwise, they may at any time have a severe and dangerous attack. Many butchers have been left crippled and unfitted to continue their business by such attacks.

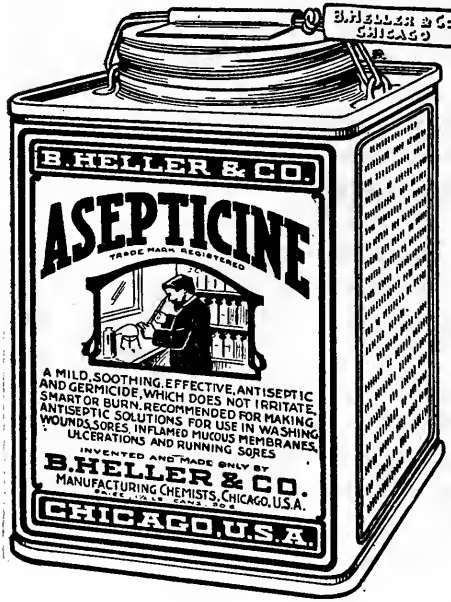
It will be of interest to the entire Butcher Trade to know that we have perfected the Best Rheumatic Treatment in existence. We will be very glad to send our description of same to any butcher who may be troubled with Rheumatism, or whose family or friends may have become victims of this disease. This literature will give full information concerning the Cause, Prevention and Cure of Rheumatism. A request will bring a prompt response.

B. HELLER & CO.

B. HELLER & CO.

ASEPTICINE

(TRADE-MARK REGISTERED)



A Mild, Soothing, Effective, Antiseptic and Germicide, which does not Irritate, Smart or Burn. Recommended for making Antiseptic Solutions for use in Washing Sores, Wounds, Inflamed Mucous Membranes, Ulcerations and Running Sores.

ASEPTICINE makes a Positive Germicidal Solution, in the proportion of one heaping teaspoonful to a pint of water. This solution will Sterilize and Cleanse any kind of Wound and Prepare the Tissues for Rapid Healing.

As a Wash or Gargle, a solution of **ASEPTICINE** has no equal for Nasal Catarrh, Suppurating Ears, Sore Throat, Tonsilitis, etc. It is entirely free from irritating properties, Cleanses the Mucous Membranes thoroughly and leaves them in the most favorable condition for Rapid Recovery.

ASEPTICINE is put up only in sealed cans, containing 8 ounces net weight.

Price 50 Cents

CHICAGO, U.S.A.

PURPLE-INE

(TRADE-MARK REGISTERED)

THE MOST EFFECTIVE DRAWING AND HEALING OINTMENT KNOWN.

PURPLE-INE Reduces Inflammation, Destroys Germs, Relieves Pain, Draws out Poisons and Foreign Matter and Rapidly Heals Wounds.

Boils, Carbuncles and Pimples are quickly drawn to a head and cured by its use. It has no equal for Healing Burns, Infected and Poisoned Wounds, Sores and Ulcers.

Butchers should always keep **PURPLE-INE** on hand, because of the danger to which they are constantly exposed of receiving scratches from bones, cuts from knives, sausage machinery, meat hooks, etc. All such wounds are very dangerous and should have immediate attention, otherwise they may produce blood poison or make troublesome sores. **PURPLE-INE** quickly heals up such wounds, and no butcher can afford to be without it.

Put up in 1 ounce Jars.
Price 50 Cents.

B. HELLER & CO.

ZANZIBAR

FURNITURE POLISH

MAKES ICE BOXES AND COUNTERS LOOK LIKE NEW

IT IS ODORLESS AND DRIES QUICKLY. IT LEAVES NO OIL OR GREASE TO ATTRACT DUST. IT IS EASY TO USE AND WITH IT ICE BOXES AND COUNTERS CAN BE KEPT NEW AT ALMOST NO EXPENSE.

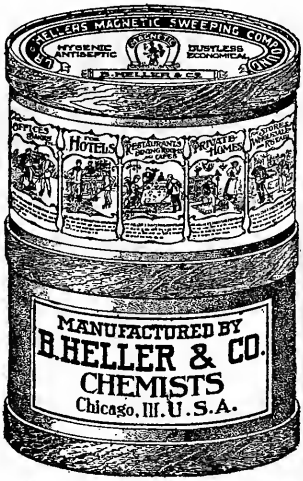
No butcher can afford to allow his Ice Boxes, Counters and other wood-work to become dingy and soiled. It attracts and holds the best class of custom to keep your shop fresh and bright, and nothing will so much assist in doing this as an occasional application of Zanzibar Furniture Polish to the wood-work in the shop.

Zanzibar Furniture Polish is the best polish to use, no matter what finish your fixtures may be. It serves equally well in the plain and dull finishes and on the finest of varnishes. It gives life and wear to the original polish, making the surfaces on which it is used retain their original gloss and finish through many years of use.

Zanzibar Furniture Polish cannot be excelled for household use. It can be used on all articles of furniture, such as Pianos, etc., with beneficial results wherever used. It is guaranteed to give satisfaction.

PUT UP IN ONE GALLON TIN CANS, PRICE $2.50 EACH

CHICAGO, U.S.A.



Read What We Have to Say About

Heller's Magnetic Sweeping Compound

It draws dust like a magnet and kills the germs in the dust. This preparation will appeal to every intelligent person.

10 REASONS WHY

Heller's Magnetic Sweeping Compound Should Be Used Where Floors Must Be Kept Clean and Sweet

First: Being magnetic, it absorbs all dust and prevents it flying in the air to settle on articles in the room.

Second: It destroys germs in dust and leaves the air in the room dust-free and pure.

Third: It cleans floors, carpets and rugs more thoroughly and with less labor.

Fourth: It eliminates the necessity of dusting after sweeping.

Fifth: It saves wear on carpets, linoleums and rugs by easily removing all dust, and keeps their colors bright and new.

Sixth: In stores the saving in shopworn and dust-injured goods will amount to much more than its cost.

Seventh: It saves labor. Floors are more quickly and more thoroughly cleaned, and the necessity of dusting fixtures, showcases, etc., after sweeping is eliminated.

Eighth: Floors may be swept by its use at any time without annoyance to customers. Hotels and restaurants can sweep dining-room floors at any time and no dust floats in the room to settle on dishes and tables.

Ninth: More diseases are conveyed by dust-laden air than in any other way. Heller's Magnetic Sweeping Compound not only gathers the dust but kills the germs contained in it. Its use saves the health of those who use it and those who enter buildings where it is used.

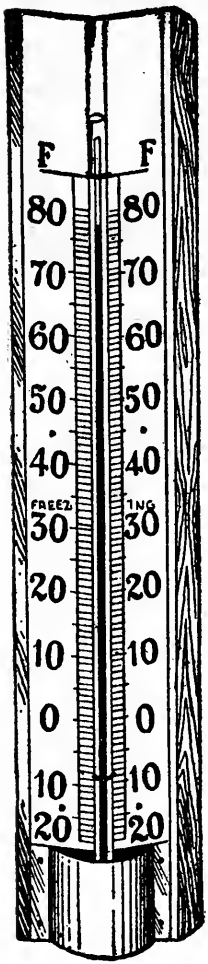
Tenth: None can afford to be without it because it saves merchandise, time, labor, wear and health.

PRICES:

50 pound Drums	**$2.00 each**
100 pound Drums	**3.50 each**
200 pound Drums	**6.00 each**
325 pound Drums	**9.00 each**

B. HELLER & CO.

SPECIAL STANDARD
COLD STORAGE
THERMOMETER



We illustrate here a thermometer especially adapted for packing-house cellars. The tube has an angle protection.

The scale is made of extra heavy brass, mounted on a solid piece of oak.

Both the Scale and Figures have been made especially plain, heavy and large, so that the degree of temperature can be seen at a distance.

The glass tube is extra heavy imported glass with a magnifying front so as to enlarge the mercury, making this a most desirable thermometer to read in a dark cooler.

THIS THERMOMETER IS GUARANTEED ABSOLUTELY CORRECT

IT IS TWELVE INCHES LONG, and is graduated from 20 degrees below zero to 80 degrees above. It is a strong instrument and we guarantee that it will give perfect satisfaction.

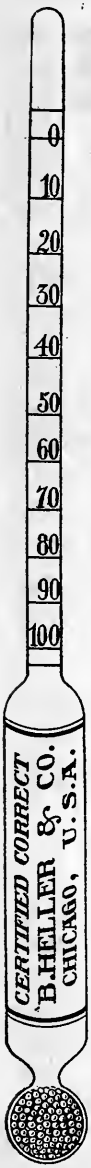
NET PRICES

Price Each	$ 1.40
Price per Dozen	15.00

CHICAGO, U.S.A.

HYDROMETERS

SALOMETERS



Many butchers are in the habit of guessing at the quantity of salt used for making the brine; others float an egg or potato to test its strength. All of these methods are very unsatisfactory for testing the brine. One egg will swim in brine where other eggs will sink in it, as it all depends upon the age of the eggs. For the benefit of all of our customers, we sell a

HYDROMETER

For Testing the Strength of Brine

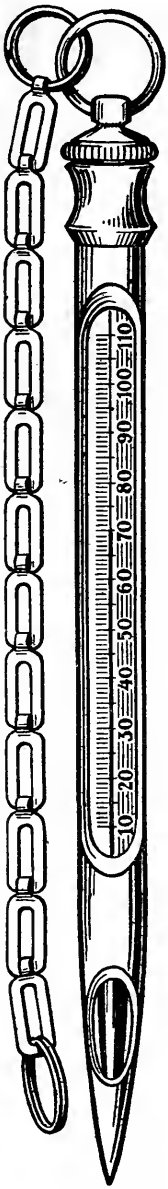
at the low price of 50 cents each.

These Hydrometers are all tested in our laboratory before shipment, and have our certificate upon them as to their correctness. It is as important to know that the Hydrometer is correct as it is to have one at all, and therefore butchers should buy only absolutely correct instruments.

Price Each, 50 cents

B. HELLER & CO.

MEAT TESTING THERMOMETER



No. 1

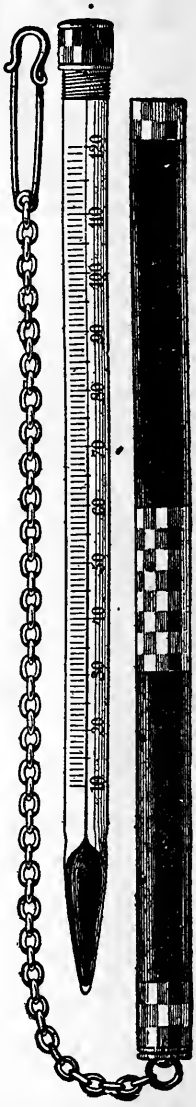
We illustrate here our Meat Testing Thermometer. It should be used by every curer of meat. It is always essential to take the temperature of the inner portion of hams, shoulders, etc., to see that they are properly chilled before curing. Very often a chill room is sufficiently cool, but a test of the meat will prove that it has not been chilled to the center. This thermometer is six inches long and has a plain scale to read, being graduated from 10 degrees to 110 degrees above zero.

No. 2 Thermometer is made for the Superintendent and Proprietor, mounted in a Gold Plated Case, with chain and pin attached with which to fasten it to the vest pocket so that it cannot drop out and break. For the cellarman the No. 1 is the best, as it will not break easily.

PRICE EACH

No. 1, $1.25

With Gold Plated Case and Chain No. 2 $1.50



No. 2

CHICAGO, U.S.A.

BOILING THERMOMETER

We here illustrate a thermometer especially adapted for boiling Bologna, Frankforts, Hams, etc. These thermometers are well protected and are adapted in every way for their special purpose. The scale is in large plain figures, and the instrument complete is about eighteen inches long. It is very necessary for every man who cooks meats to use a thermometer, and when the temperature is kept the proper degree in boiling Bologna, Hams, etc., with the aid of this boiling thermometer hundreds of dollars can be saved. In fact, all meats requiring boiling cannot be properly cooked except with the aid of a thermometer. We send a circular with each of these thermometers which gives full instructions in regard to boiling meats and sausage of all kinds.

PRICES NET

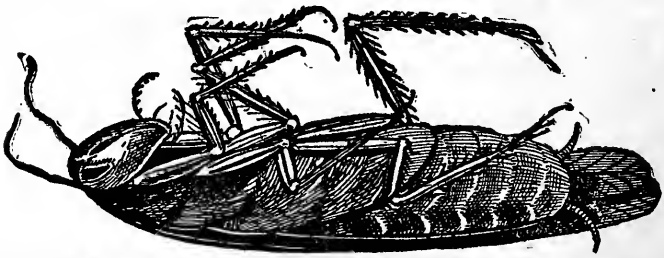
Price Each	$ 1.00
Price per Dozen	10.00

B. HELLER & CO.

HELLER'S $1000.00 GUARANTEED

ROACH DESTROYER

(Non-Poisonous)



GUARANTEED TO RID ANY PREMISES OF ROACHES AND WATERBUGS.

This powder is Scientifically Prepared with special regard to safety and cleanliness. It can be used around food products without any danger of contaminating them, as it is

NON-POISONOUS TO HUMAN BEINGS.

Roaches readily eat this powder and they also carry it to their nests on their bodies and legs. The young insects are thus destroyed by it, the same as the older ones, and it is also a very effectual destroyer of their eggs.

No matter how few Roaches or Waterbugs there may be about the premises, they multiply so fast that it will only be a question of a short time until they will become very numerous. Therefore, they should be attended to at once, as Roaches are undoubtedly the filthiest and most loathsome insects that can infest any place where foods are kept for sale.

Our Roach Destroyer will absolutely destroy every one of these pests around any Packing House, Butcher Shop or Residence, when used according to easily followed directions.

PRICES.

2-lb. cartons, per lb	75c
5-lb. cartons, per lb	70c
10 lbs. (2 5-lb. cartons), per lb	65c
30 lbs. (6 5-lb. cartons), per lb	60c
60 lbs. (12 5-lb. cartons), per lb	55c

CHICAGO, U.S.A.

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